

**A REPORT OF THE  
NATIONAL ALFALFA AND MISCELLANEOUS LEGUMES  
VARIETY REVIEW BOARD**



**ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES**

NATIONAL ALFALFA AND MISCELLANEOUS LEGUMES  
VARIETY REVIEW BOARD REPORT ©2013

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NATIONAL ALFALFA AND MISCELLANEOUS LEGUMES  
VARIETY REVIEW BOARD

ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES  
(JANUARY 2013)

The Association of Official Seed Certifying Agencies (AOSCA) National Alfalfa and Miscellaneous Legumes Variety Review Board reviewed the following varieties on January 08-09, 2013, in Denver, CO. The Board recommended the inclusion of these varieties for certification. Seed of these varieties may be certified, providing production meets all standards of the Seed Certifying Agency of the jurisdiction in which the seed is grown.

All variety information, including descriptions, claims, and research data to support any claim, was supplied to the National Alfalfa and Miscellaneous Legumes Variety Review Board by the applicants. The National Alfalfa and Miscellaneous Legumes Variety Review Board makes judgments regarding recommendation of varieties for inclusion into certification based on the data supplied. Beyond this, the National Alfalfa and Miscellaneous Legumes Variety Review Board takes no position on the accuracy or truthfulness of any description or claim made by the applicants.

Further information on current procedures, application forms, and details regarding the National Alfalfa and Miscellaneous Legumes Variety Review Board can be obtained from:

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Respectfully submitted,

Mike Moore, Chair  
National Alfalfa and Miscellaneous Legumes Variety Review Board

## 2013 AOSCA ALFALFA & MISC LEGUMES NVRB

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**PLACING THE CURSOR OVER THE DESIRED VARIETY/EXPERIMENTAL DESIGNATION  
& CLICKING WILL TAKE YOU DIRECTLY TO THE SUMMARY DESCRIPTION.**

# Optimus

(Amended – Name Change)

## Origin and Breeding History

Optimus is a synthetic variety with 55 parent plants selected for high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from a three year old Wisconsin selection nursery, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Nursery source plants composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of Optimus traces to the following germplasm sources: Abound (2%), Ascend (2%), Cornerstone (2%), Foremost II (2%), Power 4.2 (2%), TMF 421 (2%), Trialfalón (2%), WinterGold (2%), and CW 04-049 (84%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

## Areas of Probable Adaptation

Optimus is adapted to the North Central and East Central areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. Optimus has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

## Agronomic and Botanical Characteristics

Optimus is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. Optimus is Extremely Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 99% purple, 1% cream and a trace variegated. Optimus has moderate multifoliolate leaf expression rating similar to High MF check variety.

Optimus has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and pea aphid; with resistance to blue alfalfa aphid, cow pea aphid, northern root knot nematode, and stem nematode; with moderate resistance to spotted alfalfa aphid.

## Procedures for Maintaining Seed Stock

Seed increase of Optimus is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2004. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed of Optimus will be available in 2012. Certified acreage may not be published.

## PVP Information

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name Optimus

Experimental Designation(s) CW 044019

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



## PGI 212

(Amended – Name Change, Add Extremely Winter Hardy)

### Origin and Breeding History

PGI 212 is a synthetic variety with 10 parent plants selected for high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from a three year old Wisconsin selection nursery, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Nursery source plants composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of PGI 212 traces to the following germplasm sources: CW 05-002 (33.33%), CW 05-003 (33.33%), and CW 05-004 (33.33%). Breeder seed was produced under cage isolation near Woodland, California in 2005. Seed was bulk harvested from all parent plants as Synthetic generation 2.

### Areas of Probable Adaptation

PGI 212 is adapted to the North Central, East Central, and Winterhardy Intermountain areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. PGI 212 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

### Agronomic and Botanical Characteristics

PGI 212 is a dormant variety with fall dormancy similar to FD class 2 check varieties. PGI 212 is Extremely Winterhardy, similar to WS class 1 check variety. Flower color observed in the Syn.2 generation is approximately 99% purple and 1% cream. PGI 212 has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

PGI 212 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and northern root knot nematode; with resistance to blue alfalfa aphid and pea aphid; with moderate resistance to stem nematode; and with low resistance to cow pea aphid. Reaction to the spotted alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase of PGI 212 is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2005. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed of PGI 212 will be available in 2011. Certified acreage may not be published.

### PVP Information

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name PGI 212

Experimental Designation(s) CW 052036

Date NA&MLVRB first accepted this variety January 2011

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



## 5010

(Amended – Name Change)

### Origin and Breeding History

5010 is a synthetic variety with 11 parent plants selected for high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from a three year old Wisconsin selection nursery, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Nursery source plants composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of 5010 traces to the following germplasm sources: Sprint (9%) and CW D5-C05 (91%). Breeder seed was produced under cage isolation near Woodland, California in 2005. Seed was bulk harvested from all parent plants as Synthetic generation 2.

### Areas of Probable Adaptation

5010 is adapted to the North Central, East Central, and Winterhardy Intermountain areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. 5010 has been tested in Idaho, Iowa, Michigan, Minnesota, Pennsylvania, and Wisconsin

### Agronomic and Botanical Characteristics

5010 is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. Flower color observed in the Syn.2 generation is approximately 96% purple, 4% variegated, and a trace cream. 5010 has low multifoliolate leaf expression rating similar to Low MF check variety.

5010 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and pea aphid; with resistance to blue alfalfa aphid, cow pea aphid, and northern root knot nematode, and stem nematode; with moderate resistance to spotted alfalfa aphid.

### Procedures for Maintaining Seed Stock

Seed increase of 5010 is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2005. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed of 5010 will be available in 2012. Certified acreage may not be published.

### PVP Information

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name 5010

Experimental Designation(s) CW 055005

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013





# **Contender**

**(Amended – Name Change)**

## **Origin and Breeding History**

Contender is a synthetic variety with 174 parent plants selected for dense crowns, high leaf to stem ratio, vigorous roots, and no stem, crown, or root rot, high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from three-year old Iowa yield trials, four-year old Wisconsin yield trials, and from three-year old Wisconsin nurseries, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of Contender traces to the following germplasm sources: Ascend (15%), Double Eagle (2%), A 5225 (6%), SpringGold (17%), Tribute (1%), Shepherd (5%), CW 06-089 (25%), and CW 06-090 (29%). Breeder seed was produced under cage isolation near Woodland, California in 2006. Seed was bulk harvested from all parent plants as Synthetic generation 2.

## **Areas of Probable Adaptation**

Contender is adapted to the North Central, East Central, and Winterhardy Intermountain areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. Contender has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

## **Agronomic and Botanical Characteristics**

Contender is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. Flower color observed in the Syn.2 generation is approximately 93% purple, 4% variegated, 2% cream, and 1% yellow. Contender has low multifoliolate leaf expression rating similar to Low MF check variety.

Contender has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and pea aphid; and with resistance to cow pea aphid, spotted alfalfa aphid, and root knot nematode. Reaction to stem nematode and blue alfalfa aphid have not been tested.

## **Procedures for Maintaining Seed Stock**

Seed increase of Contender is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2006. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

## **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of Contender will be available in 2011. Certified acreage may not be published.

## **PVP Information**

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name Contender

Experimental Designation(s) CW 065030

Date NA&MLVRB first accepted this variety January 2011

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



# **Barricade SLT**

## **(Amended – Name Change)**

### **Origin and Breeding History**

Barricade SLT is a synthetic variety with 225 parent plants. 155 of the 225 parent plants were selected sequentially for germination, seedling growth, and mature plant regrowth after repeated irrigation with 100 mM NaCl solution in the greenhouse. 70 of the 225 parent plants were selected sequentially for germination and seedling growth in the greenhouse on field soil with >8 EC obtained from Wyoming, Nevada, Oregon, Colorado, and/or North Dakota. Parent plants were crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Parent plants were selected from crosses between selections from NaCl tolerant plants from source varieties of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of Barricade SLT traces to the following germplasm sources: SolarGold (24%), CW 054038 (33%), CW 064027 (35%), CW 073038 (2%), CW 073011 (2%), CW 074016 (2%), and CW 074017 (2%). Breeder seed was produced under cage isolation near Woodland, California in 2008. Seed was bulk harvested from all parent plants as Synthetic generation 2.

### **Areas of Probable Adaptation**

Barricade SLT is adapted to the North Central area of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. Barricade SLT has been tested in Iowa, Minnesota, and Wisconsin

### **Agronomic and Botanical Characteristics**

Barricade SLT is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. Flower color observed in the Syn.2 generation is approximately 98% purple, 1% variegated, 1% white, trace cream, and a trace yellow. Barricade SLT has moderate multifoliolate leaf expression rating similar to Moderate MF check variety. Barricade SLT has regrowth salt tolerance similar to the tolerant check variety. Barricade SLT has tolerance to salt (NaCl) at germination.

Barricade SLT has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, blue alfalfa aphid, and pea aphid; with resistance to, cow pea aphid and stem nematode; with moderate resistance to spotted alfalfa aphid. Reaction to root knot nematode has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase of Barricade SLT is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2008. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of Barricade SLT will be available in 2012. Certified acreage may not be published.

### **PVP Information**

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name Barricade SLT

Experimental Designation(s) CW 084034

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



## **CW 085028 (Exp)**

### **Origin and Breeding History**

CW 085028 is a synthetic variety with 10 parent plants selected for dense crowns, high leaf to stem ratio, vigorous roots, and no stem, crown, or root rot, and for high raceme number and florets per raceme. Parent plants were selected from a three-year old Iowa yield trial and four-year old Wisconsin yield trials, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Yield trial source plants composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of CW 085028 traces to the following germplasm sources: Pillar (10%), Charger (10%), STEALTH SF (20%), SunDance II (10%), GH 717 (20%), CW 32041 (10%), CW 35005 (10%), and CW 35035 (10%). Breeder seed was produced under cage isolation near Woodland, California in 2008. Seed was bulk harvested from all parent plants as Synthetic generation 2.

### **Areas of Probable Adaptation**

CW 085028 is adapted to the North Central area of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. CW 085028 has been tested in Iowa, Minnesota, and Wisconsin.

### **Agronomic and Botanical Characteristics**

CW 085028 is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple. CW 085028 has moderate multifoliolate leaf expression rating similar to Low MF check variety.

CW 085028 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, and Phytophthora root rot; with resistance to Verticillium wilt, pea aphid, and stem nematode; with moderate resistance to blue alfalfa aphid and spotted alfalfa aphid; with low resistance to cow pea aphid. Reaction to root knot nematode has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase of CW 085028 is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2008. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of CW 085028 will be available in 2013. Certified acreage may not be published.

### **PVP Information**

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Date this application was submitted: Nov 30, 2012

Date recommended by the NVRB: Jan 08, 2013



# Keystone II

## Origin and Breeding History

Keystone II is a synthetic variety with 44 parent plants selected for dense crowns, high leaf to stem ratio, vigorous roots, and no stem, crown, or root rot, high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from three-year old Iowa and Minnesota yield trials, a four-year old Wisconsin yield trial, and from three-year old Wisconsin nurseries, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of Keystone II traces to the following germplasm sources: CW 13043 (2%), CW 33002 (2%), CW 33012 (2%), CW 33013 (2%), CW 07-015 (42%), and Keystone (50%). Breeder seed was produced under cage isolation near Woodland, California in 2007. Seed was bulk harvested from all parent plants as Synthetic generation 2.

## Areas of Probable Adaptation

Keystone II is adapted to the North Central area of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. Keystone II has been tested in Iowa, Minnesota, and Wisconsin.

## Agronomic and Botanical Characteristics

Keystone II is a dormant variety with fall dormancy similar to FD class 3 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple. Keystone II has moderate multifoliolate leaf expression rating similar to Low MF check variety.

Keystone II has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, and Verticillium wilt; with resistance to Aphanomyces root rot (race 2), blue alfalfa aphid, pea aphid, spotted alfalfa aphid, and cow pea aphid; with moderate resistance to stem nematode. Reaction to root knot nematode has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase of Keystone II is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2007. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed of Keystone II will be available in 2013.

## PVP Information

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office

Date this application was submitted: Nov 30, 2012

Date recommended by the NVRB: Feb 06, 2013



## **PGI 459**

### **(Amended – Add Very Winter Hardy)**

#### **Origin and Breeding History**

PGI 459 is a synthetic variety with 180 parent plants selected from two-year old grazing selection plots from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, standability, high relative feed value (using Near Infrared Reflectance Spectroscopy), high forage yield potential, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leafspot. Parentage of PGI 459 traces to the following germplasm sources: Ascend, GH 717, Tribute, and CW 84028. Breeder seed (Syn.1) was produced under cage isolation near Woodland, California in 2002.

#### **Areas of Probable Adaptation:**

PGI 459 is adapted to the North Central, East Central, and Great Plains areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain, and Winterhardy Intermountain areas of the U.S. PGI 459 has been tested in Wisconsin, Iowa, Minnesota, Pennsylvania, Ohio, Nebraska, Indiana, and South Dakota.

#### **Agronomic and Botanical Characteristics**

PGI 459 is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. PGI 459 is Very Winterhardy, similar to WS class 2 check variety. Flower color observed in the Syn.2 generation is approximately 100% purple, with a trace of variegated, white, cream, and yellow.

PGI 459 has high resistance to anthracnose (race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, and root knot nematode (*Meloidogyne hapla*), with resistance to Aphanomyces root rot (race 1), Aphanomyces root rot (race 2), pea aphid, and stem nematode. Reaction to the blue alfalfa aphid has not been tested

#### **Procedures for Maintaining Seed Stock**

Seed increase of PGI 459 is on a limited generation basis with two generations each of breeder, foundation, and certified seed classes. Breeder (Syn.1 or Syn.2), foundation (Syn.2 or Syn.3), and certified (Syn.3 or Syn.4) classes will be recognized. Production of Syn.2 breeder or Syn.3 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2002. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

#### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of PGI 459 will be available in 2006. Certified acreage may not be published.

#### **PVP Information**

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name PGI 459

Experimental Designation(s) CW 24044

Date NA&MLVRB first accepted this variety January, 2006

Date(s) previous amendments were accepted January, 2010

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



## **PGI 557**

### **(Amended – Add Very Winter Hardy)**

#### **Origin and Breeding History**

PGI 557 is a synthetic variety with 10 parent plants selected for high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from a three year old selection nursery composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of PGI 557 traces to the following germplasm sources: CW 05-072 (30%), CW 05-073 (40%), and CW 05-074 (30%). Breeder seed was produced under cage isolation near Woodland, California in 2005. Seed was bulk harvested from all parent plants as Synthetic generation 2.

#### **Areas of Probable Adaptation:**

PGI 557 is adapted to the North Central and East Central areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. PGI 557 has been tested in Iowa, Minnesota, Pennsylvania, and Wisconsin.

#### **Agronomic and Botanical Characteristics**

PGI 557 is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. PGI 557 is Very Winterhardy, similar to WS class 2 check variety. Flower color observed in the Syn.2 generation is approximately 100% purple, with a trace of cream, and a trace of variegated. PGI 557 has low multifoliolate leaf expression rating similar to Low MF check variety.

PGI 557 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, stem nematode, and root knot nematode (*Meloidogyne hapla*); with resistance to blue alfalfa aphid, pea aphid; and with moderate resistance to cow pea aphid. Reaction to the spotted alfalfa aphid has not been tested.

#### **Procedures for Maintaining Seed Stock**

Seed increase PGI 557 is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2005. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

#### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of PGI 557 will be available in 2010. Certified acreage may not be published.

#### **PVP Information**

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name PGI 557

Experimental Designation(s) CW 055023

Date NA&MLVRB first accepted this variety January, 2010

Date(s) previous amendments were accepted January, 2011

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



# SolarGold

## (Amended – Add Extremely Winter Hardy)

### Origin and Breeding History

SolarGold is a synthetic variety with 16 parent plants selected for high forage dry matter yield, high forage milk per acre using Milk 2000, and/or high forage NDFD. Parent plants were selected from a three year old Wisconsin selection nursery, crossed in the greenhouse, and bulk harvested as Synthetic generation 1. Nursery source plants composed of various populations that were developed by phenotypic recurrent selection for winter hardiness, high forage dry matter yield, high NDFD (using Near Infrared Reflectance Spectroscopy), and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot, anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of SolarGold traces to the following germplasm sources: Chesapeake (6%), SpringGold (6%), and CW D4-C06 (88%). Breeder seed was produced under cage isolation near Woodland, California in 2006. Seed was bulk harvested from all parent plants as Synthetic generation 2.

### Areas of Probable Adaptation:

SolarGold is adapted to the North Central, East Central, and Winterhardy Intermountain areas of the U.S. and is intended for use in the North Central, East Central, Great Plains, Moderately Winterhardy Intermountain and Winterhardy Intermountain areas of the U.S. SolarGold has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

### Agronomic and Botanical Characteristics

SolarGold is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. SolarGold is Extremely Winterhardy, similar to WS class 1 check variety. Flower color observed in the Syn.2 generation is approximately 95% purple, 4% variegated, and 1% cream; with a trace of white. SolarGold has high multifoliolate leaf expression rating similar to High MF check variety.

SolarGold has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and pea aphid; with resistance to blue alfalfa aphid, cow pea aphid, and northern root knot nematode; with moderate resistance to spotted alfalfa aphid, Aphanomyces root rot (race 2), and stem nematode.

### Procedures for Maintaining Seed Stock

Seed increase of SolarGold is on a limited generation basis with two generations of breeder, foundation, and certified seed classes. Breeder (Syn.2 or Syn.3), foundation (Syn.3 or Syn.4), and certified (Syn.4 or Syn.5) classes will be recognized. Production of Syn.3 breeder or Syn.4 foundation seed requires consent of the breeder. Breeder seed was produced under cage isolation near Woodland, California in 2006. Sufficient foundation seed for the projected life of the variety will be maintained by Cal/West Seeds. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed of SolarGold will be available in 2011. Certified acreage may not be published.

### PVP Information

No decision has been made regarding Plant Variety Protection. This information can be forwarded to the PVP office.

Variety Name SolarGold

Experimental Designation(s) CW 064004

Date NA&MLVRB first accepted this variety January 2011

Date(s) previous amendments were accepted January 2012

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



## **Stockpile** (Amended – Name Change)

### **Breeding History**

Stockpile is a 12 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2007 to produce Syn. 1 as Breeder Seed. Seed from parent plants propagated by vegetative cuttings were equally bulked each year to produce Breeder seed. Stockpile, experimental designation was developed by Dairyland Seed Company.

### **Area of probable adaptation**

Stockpile is adapted to the North Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The state where it has been tested is Wisconsin.

### **Agronomic and Botanical Characteristics**

Stockpile is a moderately dormant variety similar to the fall dormancy 4 check. Stockpile is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow.

Stockpile has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), stem nematode, northern root-knot nematode; resistance to southern root-knot nematode, *Aphanomyces* root rot (Race2) and pea aphid. Stockpile has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2007 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient Breeder seed for the projected life of the variety.

### **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2013. Certified seed acres are not to be published.

### **PVP Information**

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Variety Name Stockpile

Experimental Designation(s) DSA01-T

Date NA&MLVRB first accepted this variety November, 2011

Date(s) previous amendments were accepted \_\_\_\_\_

Date **THIS** amendment submitted November 27, 2012

Date recommended by the NVRB: Feb 06, 2013





# **Shockwave BR**

**(Amended – Name Change)**

## **Breeding History**

Shockwave BR is a 40 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2007 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed. Shockwave BR, experimental designation was developed by Dairyland Seed Company.

## **Area of Probable Adaptation**

Shockwave BR is adapted to the North Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The state where it has been tested is Wisconsin.

## **Agronomic and Botanical Characteristics**

Shockwave BR is a moderately dormant variety similar to the fall dormancy 4 check. Shockwave BR is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow.

Shockwave BR has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), stem nematode, northern root-knot nematode; resistance to southern root-knot nematode, *Aphanomyces* root rot (Race2) and moderate resistance to pea aphid. Shockwave BR has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

## **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2007 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient Breeder seed for the projected life of the variety.

## **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2013. Certified seed acres are not to be published.

## **PVP Information**

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Variety Name Shockwave BR

Experimental Designation(s) DSA05-BR

Date NA&MLVRB first accepted this variety November, 2011

Date(s) previous amendments were accepted \_\_\_\_\_

Date THIS amendment submitted November 27, 2012

Date recommended by the NVRB: Feb 06, 2013



## **Secure-BR**

**(Amended – Name Change)**

### **Breeding History**

Secure-BR (DSB05-BR) is a 12 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries for branch rootedness. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2009 to produce Syn. 1 as Breeder Seed. Seed from parent plants propagated from vegetative cuttings were equally bulked each year to produce Breeder seed. Secure-BR (DSB05-BR) was developed by Dairyland Seed Company and its experimental designation is DSB05-BR.

### **Area of Probable Adaptation**

Secure-BR (DSB05-BR) is adapted to the North Central and East Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The states where it has been tested are Pennsylvania, New York and Wisconsin.

### **Agronomic and Botanical Characteristics**

Secure-BR (DSB05-BR) is a moderately dormant variety similar to the fall dormancy 4 check. Secure-BR (DSB05-BR) is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow.

Secure-BR (DSB05-BR) has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode, southern root-knot nematode; resistance to stem nematode, pea aphid and *Aphanomyces* root rot (Race2). Secure-BR (DSB05-BR) has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2009 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2014. Certified seed acres are not to be published.

### **PVP Information**

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013



## DSB08-M (Exp)

### Breeding History

DSB08-M is an 8 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2009 to produce Syn. 1 as Breeder Seed. Seed from parent plants propagated from vegetative cuttings were equally bulked each year to produce Breeder seed. DSB08-M was developed by Dairyland Seed Company and its experimental designation is DSB08-M.

### Area of Probable Adaptation

Crave is adapted to the North Central and East Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The states where it has been tested are Minnesota, Pennsylvania, Michigan and Wisconsin.

### Agronomic and Botanical Characteristics

DSB08-M is a moderately dormant variety similar to the fall dormancy 4 check. DSB08-M is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. DSB08-M has low multifoliate expression rating similar to the low MF check variety.

DSB08-M has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode, southern root-knot nematode; resistance to pea aphid, stem nematode and *Aphanomyces* root rot (Race2). DSB08-M has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2009 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### Date Certified Seed to be First Offered for Sale

Certified Seed will be available spring of 2014. Certified seed acres are not to be published.

### PVP Information

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013



# HybriForce-3400

## Breeding History

HybriForce-3400 (msSunstra-803) is a five clone 75-95% hybrid alfalfa variety consisting of a female, maintainer and restorer clones. Parent clones were selected out of forage yield plots and/or disease nurseries. These parent clones were tested for male sterility, maintaining and restoration ability. The parent clones were also progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1). The female clone, maintainer clone and restorer clone trace to Dairyland experimental germplasm. Female seed (D-1010) was generated by crossing a cytoplasmic male sterile female clone by a maintainer clone by hand greenhouse crosses in 2006. The female clones were harvested to produce the female Breeder Seed near Sloughhouse, California in 2007-09. Female seed was kept separate each year to produce Breeder seed. Male Breeder seed (Syn. 1) (DS764M) was produced in isolation in 2003 and bulked near Sloughhouse, CA. The female, maintainer and restorer clones were propagated by vegetative cuttings for Breeder Seed increase. HybriForce-3400 (msSunstra-803) was developed by Dairyland Seed Company and its experimental designation is msSunstra-803.

## Area of Probable Adaptation

HybriForce-3400 (msSunstra-803) is adapted to the North Central Region of the United States and intended for use across the North Central Region of the United States. The states where it has been tested are Wisconsin, Minnesota, Nebraska and Pennsylvania.

## Agronomic and Botanical Characteristics

HybriForce-3400 (msSunstra-803) is a moderately dormant variety similar to the fall dormancy 4 check. HybriForce-3400 (msSunstra-803) is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 9% variegated with trace amounts of cream, white and yellow. DS764M is 1% white seed.

HybriForce-3400 (msSunstra-803) has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, *Verticillium* wilt, anthracnose (Race 1), *Aphanomyces* root rot (Race1), stem nematode, northern root-knot nematode; resistance to, pea aphid and southern root-knot nematode and moderate resistance to *Aphanomyces* root rot (Race 2). HybriForce-3400 (msSunstra-803) has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

## Procedures for Maintaining Seed Stock

Female Breeder seed was produced by crossing the cytoplasmic male sterile clone (A) by the maintainer clone (B) in field isolation near Sloughhouse, CA in 2007-09. Female seed (D-1010) was kept separate across production years. Male Breeder seed (Syn. 1) (DS764M) was produced in isolation in 2003 and bulked near Sloughhouse, CA. Male Foundation seed (Syn. 2) (DS764M) was produced from Breeder seed. The 75-95% hybrid seed (D-1010xDS764M=F1) was produced from crossing female seed by either Syn. 1 or Syn. 2 male seed. Two generations of male seed are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient seed for the projected life of the variety.

## Date Certified Seed to be First Offered for Sale

Certified Seed will be available spring of 2014. Certified seed acres are not to be published.

## PVP Information

Application for the Plant Variety Protection is undecided.  
Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NAVRB: Feb 06, 2013



## **Cisco II**

### **(Amended – Forage Production Under Salt Stress, Salt Tolerance of Germinating Alfalfa Seeds)**

#### **Breeding History**

Cisco II is a 34 clone synthetic. Thirty of parent clones were selected out of high saline soils for persistence, fall dormancy and forage yield and 4 clones were selected from forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1) and forage yield production under salt stress. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2006 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed. Cisco II was developed by Dairyland Seed Company and its experimental designation is DSB38FD6.

#### **Area of Probable Adaptation**

Cisco II is adapted to the North Central and Southwest Regions of the United States and intended for use across the Southern half of the United States. The states where it has been tested are Wisconsin and California.

#### **Agronomic and Botanical Characteristics**

Cisco II is a moderately dormant variety similar to the fall dormancy 6 check. Cisco II is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. Cisco II has forage production under salt stress similar to the tolerant check. The germination of Cisco II under salt stress is similar to the tolerant check.

Cisco II has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, *Verticillium* wilt, pea aphid, northern root-knot nematode; resistance to anthracnose (Race 1), stem nematode, southern root-knot nematode and moderate resistance to *Aphanomyces* root rot (Race 1). Cisco II has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

#### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2006 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient Breeder seed for the projected life of the variety.

#### **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2012. Certified seed acres are not to be published.

#### **PVP Information**

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Variety Name         Cisco II          
Experimental Designation(s)         DSB38FD6          
Date NA&MLVRB first accepted this variety         November, 2011          
Date(s) previous amendments were accepted     
Date THIS amendment submitted         November, 2012          
Date recommended by the NVRB:         Feb 06, 2013        



## Crave

### Breeding History

Crave is a 12 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2008 to produce Syn. 1 as Breeder Seed. Seed from parent plants propagated from vegetative cuttings were equally bulked each year to produce Breeder seed. Crave was developed by Dairyland Seed Company and its experimental designation is DSA08-M.

### Area of Probable Adaptation

Crave is adapted to the North Central and East Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The states where it has been tested are Minnesota, New York, Michigan and Wisconsin.

### Agronomic and Botanical Characteristics

Crave is a moderately dormant variety similar to the fall dormancy 4 check. Crave is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. Crave has low multifoliolate expression rating similar to the low MF check variety.

Crave has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode, southern root-knot nematode; resistance to pea aphid, stem nematode and *Aphanomyces* root rot (Race2). Crave has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2008 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### Date Certified Seed to be First Offered for Sale

Certified Seed will be available spring of 2013. Certified seed acres are not to be published.

### PVP Information

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013



## **FSG 329** **(Amended – Multifoliate)**

### **Breeding History**

FSG 329 is a 90 clone synthetic. The parent clones were selected out of forage yield plots and/or disease and nematode selection evaluations. These parent plants were selected for a combination of the following traits: multifoliate expression, herbage yield, winter hardiness, *Verticillium* wilt and stem nematode resistance. All of parent plants trace back to Dairyland experimentals. Parent plants were planted in cage isolation and inter-pollinated by leaf cutting bees near Sloughhouse, California in 2005-2007 to produce Syn. 1 as Breeder Seed.

### **Area of Probable Adaptation**

FSG 329 is adapted to the North Central Region of the United States and intended for use across the North Central, Great Plains and East Central Regions of the United States. The state where it has been tested is Wisconsin.

### **Agronomic and Botanical Characteristics**

FSG 329 is a dormant variety similar to the fall dormancy 3 check. DS730ML is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. FSG 329 has low multifoliate expression rating similar to the low MF check variety.

FSG 329 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode, stem nematode; resistance to pea aphid. FSG 329 has not been tested for resistance to blue alfalfa aphid and spotted alfalfa aphid.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in cage isolation near Sloughhouse, CA in 2004-2006. Seed from parental clones were equally bulked. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. One generation each of Breeder, Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient Breeder seed for the projected life of the variety.

### **Date Certified Seed First Offered for Sale**

Certified Seed will be available spring of 2009.

### **PVP Information**

Application for the Plant Variety Protection is undecided.  
Information in the NAVRB application can be forwarded to the PVP office.

Variety Name FSG 329  
Experimental Designation(s) DS730ML  
Date NA&MLVRB first accepted this variety 11/29/07  
Date(s) previous amendments were accepted \_\_\_\_\_  
Date amendment submitted 11/20/2012  
Date recommended by the NVRB: Jan 08, 2013



## FSG 423ST

### **Breeding History**

FSG 423ST is a 60 clone synthetic. The parent clones were selected out of saline soils for persistence, branch root and forage yield. All of parent plants trace back to Dairyland experimental germplasm. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2008 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed. FSG 423ST was developed by Dairyland Seed Company and its experimental designation is DS39ST.

### **Area of Probable Adaptation**

FSG 423ST is adapted to the North Central Region of the United States and intended for use across the North Central Region of the United States. The state where it has been tested is Wisconsin.

### **Agronomic and Botanical Characteristics**

FSG 423ST is a moderately dormant variety similar to the fall dormancy 4 check. FSG 423ST is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. FSG 423ST has forage production under salt stress is similar to the tolerant check. The germination of FSG 423ST under salt stress is similar to the tolerant check

FSG 423ST has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, *Verticillium* wilt, northern root-knot nematode; resistance to pea aphid, anthracnose (Race 1), *Aphanomyces* root rot (Race1), stem nematode, and southern root-knot nematode. FSG 423ST has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2008 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2013. Certified seed acres are not to be published.

### **PVP Information**

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013





## Ladak II

### Breeding History

Ladak II a 140 clone synthetic variety. One hundred plants were selected out of a 27-year old stand of Ladak in eastern Washington for drought tolerance. Forty plants were selected from FSG229 for salt tolerance, persistence, visual herbage yield and root and crown health. Selected plants were pollinated in field isolation Sloughhouse, CA. Seed was bulked to produce Syn.1 as Breeder Seed in 2008. Ladak II was developed by Dairyland Seed Company and its experimental designation is DSC-24 Ladak.

### Area of Probable Adaptation

Ladak II is adapted to the North Central Region of the United States and intended for use across the North Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain Regions of the United States. The state where it has been tested is Wisconsin.

### Agronomic and Botanical Characteristics

Ladak II is a dormant variety similar to the fall dormancy 2 check. Ladak II is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow.

Ladak II has high resistance to bacterial wilt, *Fusarium* wilt, northern root-knot nematode; resistance to *Phytophthora* root rot, stem nematode, pea aphid; moderate resistance to anthracnose (Race 1) and *Verticillium* wilt. Ladak II has not been tested for resistance to blue alfalfa aphid, *Aphanomyces* root rot (Race1) and spotted alfalfa aphid.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2008. Seed from parental clones were bulked. Foundation seed (Syn. 2 or 3) was produced from Breeder or second generation Foundation seed and Certified seed (Syn. 3 or 4) from Foundation seed. One generation each of Breeder and two generations Foundation and Certified seed classes are recognized. The second-generation foundation seed may be produced at the discretion of Dairyland Research. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### Date Certified Seed First Offered for Sale

Certified Seed will be available spring of 2013.

### PVP Information

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013



## Magnum CR

### Breeding History

Magnum CR is a 45 clone synthetic. The parent clones were selected out of salt tolerance nurseries for persistence, plant and root vigor and expression of rhizomatous crowns. All of parent plants trace back to Dairyland experimentals which trace back to Magnum germplasm. Parent plants were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2006 to produce Syn. 1 as Breeder Seed. Seed from parent plants were bulked to produce Breeder seed. Magnum CR was developed by Dairyland Seed Company and its experimental designation is DS375CR.

### Area of Probable Adaptation

Magnum CR is adapted to the North Central Region of the United States and intended for use across the North Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain Regions of the United States. The state where it has been tested is Wisconsin.

### Agronomic and Botanical Characteristics

Magnum CR is a dormant variety similar to the fall dormancy 2 check. Magnum CR is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 80% purple, 20% variegated with trace amounts of cream. Magnum CR has forage production under salt stress is similar to the tolerant check. The germination of Magnum CR under salt stress is similar to the tolerant check

Magnum CR has high resistance to anthracnose (Race 1), bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, *Verticillium* wilt, northern root-knot nematode; resistance to *Aphanomyces* root rot (Race1), stem nematode, and southern root-knot nematode and moderate resistance to pea aphid. Magnum CR has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2006 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### Date Certified Seed to be First Offered for Sale

Certified Seed will be available spring of 2014. Certified seed acres are not to be published.

### PVP Information

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 06, 2013



# **Magnum Salt**

## **(Amended – Forage Production Under Salt Stress, Salt Tolerance of Germinating Alfalfa Seeds)**

### **Breeding History**

Magnum Salt is a 40 clone synthetic. The parent clones were selected out of saline soils for persistence, branch root and forage yield. All of parent plants trace back to Dairyland experimental germplasm with greater than 50% trace to Magnum. They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2008 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed. Magnum Salt was developed by Dairyland Seed Company and its experimental designation is DS921 Salt.

### **Area of Probable Adaptation**

Magnum Salt is adapted to the North Central Region of the United States and intended for use across the North Central, Great Plains and Winterhardy Intermountain Regions of the United States. The states where it has been tested are North Dakota and Wisconsin.

### **Agronomic and Botanical Characteristics**

Magnum Salt is a moderately dormant variety similar to the fall dormancy 4 check. Magnum Salt is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow. Magnum Salt has forage production under salt stress is similar to the tolerant check. The germination of Magnum Salt under salt stress is similar to the tolerant check.

Magnum Salt has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, *Verticillium* wilt, stem nematode, northern root-knot nematode; resistance to *Aphanomyces* root rot (Race 1), anthracnose (Race 1), pea aphid and southern root-knot nematode. Magnum Salt has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughhouse, CA in 2008 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Research International will maintain sufficient Breeder seed for the projected life of the variety.

### **Date Certified Seed to be First Offered for Sale**

Certified Seed will be available spring of 2012. Certified seed acres are not to be published.

### **PVP Information**

Application for the Plant Variety Protection is undecided.  
Information in the NAVRB application can be forwarded to the PVP office.

Variety Name Magnum Salt  
Experimental Designation(s) DS921 Salt  
Date NA&MLVRB first accepted this variety 11/23/11  
Date(s) previous amendments were accepted \_\_\_\_\_  
Date amendment submitted 11/20/2012

Date recommended by the NVRB: Feb 06, 2013



## Persist III

### Breeding History

Persist III is a 16 clone synthetic. The parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were progeny tested for one or more of the following traits: forage yield, stand persistence, forage quality, resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt and *Aphanomyces* root rot (Race 1 and 2). Parent plants trace back to Persist (9) and Dairyland experimentals (7). They were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughouse, California in 2008 to produce Syn. 1 as Breeder Seed. Seed from parent plants were propagated by vegetative cuttings were equally bulked each year to produce Breeder seed. Persist III was developed by Dairyland Seed Company and its experimental designation is DSA03-T.

### Area of Probable Adaptation

Persist III is adapted to the North Central and East Central Region of the United States and intended for use across the North Central and East Central Region of the United States. The states where it has been tested are Minnesota, New York, Pennsylvania and Wisconsin.

### Agronomic and Botanical Characteristics

Persist III is a moderately dormant variety similar to the fall dormancy 4 check. Persist III is very winter hardy similar to the winter survival 2 check. Flower color in the Syn. 2 generation is 90% purple, 10% variegated with trace amounts of cream, white and yellow.

Persist III has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), stem nematode, northern root-knot nematode, southern root-knot nematode; resistance to pea aphid and moderate resistance to *Aphanomyces* root rot (Race2). Persist III has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were grown in field isolation near Sloughouse, CA in 2008 or Breeder seed (Syn.2) produced from Syn.1. Foundation seed (Syn.2) was produced from Breeder seed and Certified seed (Syn. 2 or 3) from either Breeder or Foundation seed. Two generations of Breeder, one generation of Foundation and two generations of Certified seed classes are recognized. A maximum of three harvest years each is permitted on stands producing Breeder and Foundation seed with five years for Certified seed. Dairyland Seed Company will maintain sufficient Breeder seed for the projected life of the variety.

### Date Certified Seed to be First Offered for Sale

Certified Seed will be available spring of 2014. Certified seed acres are not to be published.

### PVP Information

Application for the Plant Variety Protection is undecided.

Information in the NAVRB application can be forwarded to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Jan 08, 2013



# WL 454HQ.RR

## (Amended – Forage Production Under Salt Stress, Northern Root Knot Nematode)

### Origin and Breeding History

WL 454HQ.RR is a synthetic variety with 63 parent plants developed by Forage Genetics. Forage Genetics International experimental designation is FG R66Bx320. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

### Areas of Probable Adaptation

This variety is adapted to the Moderately Winterhardy Intermountain and Southwest regions. This variety has been tested in California and is intended for use in the Moderately Winterhardy Intermountain and Southwest regions.

### Agronomic and Botanical Characteristics

Test variety is Moderately Fall Dormant similar to FD6 checks. Flower color (Syn2) is 100% purple, with a trace of variegated, cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. WL 454HQ.RR has moderate multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check. Test variety has improved forage yield under saline stress similar to the salt tolerant check.

This variety has high resistance to anthracnose (Race 1), Fusarium wilt, Phytophthora root rot, pea aphid, and stem nematode: with resistance bacterial wilt, Verticillium wilt, root knot nematode (Northern *M. Hapla*) and spotted alfalfa aphid. Reaction to Aphanomyces root rot and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 454HQ.RR

Experimental Designation(s) FG R66Bx320

Date NA&MLVRB first accepted this variety January, 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 21, 2013



## 428RR

### Origin and Breeding History

428RR is a synthetic variety with 105 parent plants that was developed by Forage Genetics International. Parent plants contained the commercial Roundup Ready event J101 and were selected from FGI breeding populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). A combination of Genotypic and Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

FG 428RR is adapted to the North Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Iowa, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

FG 428RR is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 95% purple, 2% variegated, 1% cream, 1% white and 1% yellow. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

FG 428RR is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG 428RR has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and pea aphid; with moderate resistance to stem nematode. Reaction to root knot nematode (Northern *M. hapla*), spotted alfalfa aphid and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## 6015R

### Origin and Breeding History

6015R is a synthetic variety with 10 parent plants that was developed by Forage Genetics International. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: Fusarium wilt, Phytophthora root rot and stem nematode. A combination of Genotypic and Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to Triple Play (20%) and to various FGI experimental populations (80%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

6015R is adapted to the Southwest U.S. and similar environments. The variety has been tested in California and Arizona and is intended for use in the Southwest.

### Agronomic and Botanical Characteristics

6015R is very nondormant similar to the FD 10 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. Test variety is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. This variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant pea aphid, spotted alfalfa aphid, blue alfalfa aphid, Northern root knot nematode (*M. hapla*) and stem nematode, resistant to anthracnose, bacterial wilt, *Fusarium* wilt, Phytophthora root rot and moderately resistant to *Verticillium* wilt. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2007. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Production of Syn2 foundation seed requires the consent of the breeder. Production of foundation (Syn3) seed from foundation (Syn2) seed is not permitted. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if 6015R is accepted for certification agencies.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information:

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information may not be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 46A117 (Exp)

### Origin and Breeding History

FG 46A117 is a synthetic variety with 56 parent plants that was developed by Forage Genetics International. Parent plants were selected for resistance to *Aphanomyces* root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and *Aphanomyces* root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

### Areas of Probable Adaptation

FG 46A117 is adapted to the North Central, East Central and Winterhardy Intermountain regions. This variety has been tested in New York, Idaho and Wisconsin and is intended for use in the North Central, East Central and Winterhardy Intermountain regions. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

### Agronomic and Botanical Characteristics

FG 46A117 is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 97% purple, 1% variegated, 1% white, 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression.

FG 46A117 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, *Aphanomyces* root rot (Race 1), *Aphanomyces* root rot (Race 2), spotted alfalfa aphid, stem nematode and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2006. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013





## 6472A

### Origin and Breeding History

6472A is a synthetic variety with 77 parent plants. Parent plants were selected for resistance to Aphanomyces root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

6472A is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### Agronomic and Botanical Characteristics

6472A is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 93% purple, 4% variegated, 2% white and 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

6472A has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1), Aphanomyces root rot (Race 2) and pea aphid; with resistance to stem nematode. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 48A177 (Exp)

### Origin and Breeding History

FG 48A177 is a synthetic variety with 88 parent plants. Parent plants were selected for resistance to Aphanomyces root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

FG 48A177 is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### Agronomic and Botanical Characteristics

FG 48A177 is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 95% purple, 2% variegated, 2% white and 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

FG 48A177 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and Aphanomyces root rot (Race 2). Reaction to spotted alfalfa aphid, pea aphid, stem nematode, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 48A178 (Exp)

### Origin and Breeding History

FG 48A178 is a synthetic variety with 63 parent plants that was developed by Forage Genetics International. Parent plants were selected for resistance to *Aphanomyces* root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and *Aphanomyces* root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

FG 48A178 is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### Agronomic and Botanical Characteristics

FG 48A178 is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 93% purple, 3% variegated, 2% white and 2% yellow with a trace of cream. This variety has high multifoliolate leaf expression.

FG 48A178 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, *Aphanomyces* root rot (Race 1) and *Aphanomyces* root rot (Race 2); with resistance to stem nematode and pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## AmeriStand 427TQ

### Origin and Breeding History

AmeriStand 427TQ is a synthetic variety with 84 parent plants that was developed by Forage Genetics International. Parent plants were selected for resistance to *Aphanomyces* root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and *Aphanomyces* root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

AmeriStand 427TQ is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### Agronomic and Botanical Characteristics

AmeriStand 427TQ is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 92% purple, 4% variegated, 2% white and 2% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

AmeriStand 427TQ has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, *Aphanomyces* root rot (Race 1), *Aphanomyces* root rot (Race 2) and stem nematode; with resistance to pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# Camas

## (Amended – Name Change, Northern Root Knot Nematode)

### Origin and Breeding History

Camas is a synthetic variety with 20 parent plants developed by Forage Genetics. Parent plants were selected for resistance to one or more of the following pests: Fusarium wilt, Verticillium wilt, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

Camas is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions. It has been tested in Idaho and Colorado and is intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

Camas is Moderately Fall Dormant similar to FD4 check. Flower Color (Syn2) is 94% purple, 4% white and 2% cream with a trace of yellow and variegated. FG 48W203 has moderate multifoliolate leaf expression.

Camas has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1), Northern root knot nematode (*M. hapla*) and stem nematode; with resistance to pea aphid. Reaction to Verticillium wilt, spotted alfalfa aphid and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name Camas

Experimental Designation(s) (FG 48W203)

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# GUNNER

## (Amended – Northern Root Knot Nematode)

### Origin and Breeding History

GUNNER is a synthetic variety with 14 parent clones. Forage Genetics International experimental designation is FG 57M121. Parent clones were selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent clones. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

GUNNER is adapted to the North Central, East Central, Great Plains and Winterhardy Intermountain. This variety has been tested in Nebraska, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Great Plains and Winterhardy Intermountain.

### Agronomic and Botanical Characteristics

GUNNER is Moderately Fall Dormant similar to FD5 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 94% purple, 5% variegated and 1% yellow with a trace of cream and white. This variety has high multifoliolate leaf expression.

GUNNER has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, root knot nematode (Northern *M. hapla*) and Aphanomyces root rot (Race 1); with resistance to pea aphid and stem nematode. Reaction to spotted alfalfa aphid and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2007. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act. The information in this application may not be forwarded to the PVP office.

Variety Name        GUNNER

Experimental Designation(s)    FG 57M121

Date NA&MLVRB first accepted this variety    January 2012

Date(s) previous amendments were accepted    \_\_\_\_\_

Date amendment submitted        November 28, 2012

Date recommended by the NVRB:        Feb 21, 2013



# Nimbus

## Origin and Breeding History

Nimbus is a synthetic variety with seven parent plants that was developed by Forage Genetics International. Parent plants were selected for resistance to one or more of the following pests: Fusarium wilt, Verticillium wilt, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1). Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to Rebound 5.0 (14%), MasterPiece II (14%), 6441 (14%) and four FGI experimental populations (58%). In 2007 Syn1 seed was produced in Nampa, ID and harvested in total on all parents and bulked to form breeder seed.

## Areas of Probable Adaptation

Nimbus is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions of the U.S. and similar environments. The variety has been tested in Washington, Oregon, Idaho and Colorado and intended use is in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions

## Agronomic and Botanical Characteristics

Nimbus is moderately dormant similar to the FD 5 check. Flower color (Syn 2) is 95% Purple, 4% Variegated, 1% Yellow with a trace of Cream and White. It expresses a moderate degree of multifoliolate leafiness. Test variety has improved forage yield under saline stress similar to the salt tolerant check.

The variety is highly resistant to anthracnose, bacterial wilt, *Fusarium* wilt, Phytophthora root rot, *Aphanomyces* root rot (race 1), Pea aphid, Northern root knot nematode and stem nematode. It is resistant to *Verticillium* wilt. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

## Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Production of Syn 2 foundation seed requires consent of the breeder. Breeder seed (Syn1) was produced in 2007 near Nampa, ID. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if Nimbus (FG 57W207) is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

## PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information may not be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 57W208 (Exp)

### Origin and Breeding History

FG 57W208 is a synthetic variety with 14 parent plants that was developed by Forage Genetics International. Parent plants were selected for resistance to one or more of the following pests: Fusarium wilt, Verticillium wilt, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1). Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to Grandstand (29%), and six FGI experimental populations (71%). In 2007 Syn1 seed was produced in Nampa, ID, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 57W208 is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions of the U.S. and similar environments. The variety has been tested in Washington, Oregon, Idaho and Colorado and intended use is in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

FG 57W208 is moderately fall dormant similar to the FD 5 check. Flower color (Syn 2) is 95% Purple, 2% Variegated, trace Yellow, 1% Cream and 2% White. It expresses a high degree of multifoliolate leafiness.

The variety is highly resistant to anthracnose, bacterial wilt, *Fusarium* wilt, Phytophthora root rot, *Verticillium* wilt, *Aphanomyces* root rot (race 1), Pea aphid, Northern root knot nematode (*M. hapla*) and stem nematode. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Production of Syn 2 foundation seed requires consent of the breeder. Breeder seed (Syn1) was produced in 2007 near Nampa, ID. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 57W208 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013





## 6585Q

### **Origin and Breeding History**

6585Q is a synthetic variety with 13 parent clones that was developed by Forage Genetics International. Parent clones were selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). A combination of phenotypic and genotypic selection was used to identify the parent clones. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### **Areas of Probable Adaptation**

6585Q is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### **Agronomic and Botanical Characteristics**

6585Q is Moderately Fall Dormant similar to FD5 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 96% purple, 2% variegated, 1% white and 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression.

6585Q has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and stem nematode; with resistance to pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 79T094 (Exp)

### Origin and Breeding History

FG 79T094 is a synthetic variety with 251 parent plants. Parent plants were selected from old forage yield trials. Phenotypic selection was used to identify the parent plants (persistence, vigor and freedom from leaf diseases). The germplasm sources used in the development trace to WL 611 (35%) and FGI breeding lines (65%). In 2008 Syn1 seed was produced near Marcos Juarez, Argentina, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 79T094 is adapted to the winter active regions of Argentina. The variety has been tested in Argentina and is intended for use in Argentina.

### Agronomic and Botanical Characteristics

FG 79T094 is nondormant similar to the FD 8 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White.

The variety is highly resistant pea aphid and stem nematode; resistant to Anthracnose, bacterial wilt, Fusarium wilt and Phytophthora root rot and has low resistance to Aphanomyces Root Rot (race 1). It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3) and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Breeder seed (Syn1) was produced in 2008 near Marcos Juarez, Argentina. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 79T094 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 89T095 (Exp)

### Origin and Breeding History

FG 89T095 is a synthetic variety with 506 parent plants that was developed by Forage Genetics International. Parent plants were selected from old forage yield trials. Phenotypic selection was used to identify the parent plants (persistence, vigor and freedom from leaf diseases). The germplasm sources used in the development trace to FGI breeding lines (100%). In 2008 Syn1 seed was produced near Marcos Juarez, Argentina, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 89T095 is adapted to the winter active regions of Argentina. The variety has been tested in Argentina and intended use is in Argentina.

### Agronomic and Botanical Characteristics

FG 89T095 is very nondormant similar to the FD 9 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White.

The variety is highly resistant to anthracnose, *Fusarium* wilt, and Pea aphid; resistant to Phytophthora root rot and stem nematode; moderately resistant to bacterial wilt with low resistance to *Aphanomyces* Root Rot (race 1). It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3) and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Breeder seed (Syn1) was produced in 2008 near Marcos Juarez, Argentina. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 89T095 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 99T096 (Exp)

### Origin and Breeding History

FG 99T096 is a synthetic variety with 275 parent plants that was developed by Forage Genetics International. Parent plants were selected from old forage yield trials. Phenotypic selection was used to identify the parent plants (persistence, vigor and freedom from leaf diseases). The germplasm sources used in the development trace to WL 903 (52%), Bacana (25%) and FGI breeding lines (23%). In 2008 Syn1 seed was produced near Marcos Juarez, Argentina, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 99T096 is adapted to the winter active regions of Argentina. The variety has been tested in Argentina and intended use in Argentina.

### Agronomic and Botanical Characteristics

FG 99T096 is very nondormant similar to the FD 10 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant to stem nematode; resistant to anthracnose, *Fusarium* wilt, Phytophthora root rot and pea aphid; moderately resistant to bacterial wilt with low resistance to *Aphanomyces* Root Rot (race 1). It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3) and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Breeder seed (Syn1) was produced in 2008 near Marcos Juarez, Argentina. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 99T096 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information may not be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG 99T097 (Exp)

### Origin and Breeding History

FG 99T097 is a synthetic variety with 223 parent plants that was developed by Forage Genetics International. Parent plants were selected from old forage yield trials. Phenotypic selection was used to identify the parent plants (persistence, vigor and freedom from leaf diseases). The germplasm sources used in the development trace to Milonga II (37%), FGI breeding lines (58%), Panalfa 90 (3%) and DK 194 (2%). In 2008 Syn1 seed was produced near Marcos Juarez, Argentina, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 99T097 is adapted to the winter active regions of Argentina. The variety has been tested in Argentina and intended use in Argentina.

### Agronomic and Botanical Characteristics

FG 99T097 is very nondormant similar to the FD 9 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. This variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check

The variety is highly resistant to *Fusarium* wilt; resistant to anthracnose, Phytophthora root rot, pea aphid and stem nematode; and has moderate resistance to bacterial wilt and low resistance to *Aphanomyces* Root Rot (race 1). It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2) and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Breeder seed (Syn1) was produced in 2008 near Marcos Juarez, Argentina. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 99T097 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



**FG 106T701 (Exp)**  
**(Amended – Blue Alfalfa Aphid Resistance)**

**Breeding History**

FG 106T701 is a synthetic variety consisting of 26 parent plants that was developed by Forage Genetics International. Plants were selected based on fall dormancy reaction, persistence and for Phytophthora root rot resistance. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest.

**Agronomic and Botanical Characteristics**

This variety is Very Non-Dormant similar to FD11 check. Flower Color (Syn2) is 100% purple, with a trace of variegated, white, cream and yellow.

This variety has high resistance to Fusarium wilt, Phytophthora root rot, pea aphid, spotted alfalfa aphid, stem nematode and blue alfalfa aphid; with low resistance to anthracnose (Race 1) and bacterial wilt. Reaction to Verticillium wilt, Aphanomyces root rot and root knot nematode has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2006. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2010.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act. The information in this application may not be forwarded to the PVP office.

Variety Name \_\_\_\_\_

Experimental Designation(s) FG 106T701

Date NA&MLVRB first accepted this variety January 2010

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28,2012

Date recommended by the NVRB: Jan 08, 2013



**FG 115T288 (Exp)**  
**(Amended – Blue Alfalfa Aphid Resistance)**

**Breeding History**

FG 115T288 is a synthetic variety consisting of 120 parent plants that was developed by Forage Genetics International. Plants were selected based on forage yield, fall dormancy reaction, persistence and pest resistance. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest region.

**Agronomic and Botanical Characteristics**

Test variety is Very Non-Dormant similar to FD11 check. Flower Color (Syn2) is 100% purple with a trace of variegated, white, cream and yellow.

Test variety has high resistance to *Fusarium* wilt, pea aphid, blue alfalfa aphid and stem nematode; resistance to *Phytophthora* root rot; low resistance to *Anthracnose* (Race 1) and bacterial wilt. Reaction to *Verticillium* wilt, *Aphanomyces* root rot, root knot nematode and spotted alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2005. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2009.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name \_\_\_\_\_

Experimental Designation(s) FG 115T288

Date NA&MLVRB first accepted this variety January 2009

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



## FG 98T091 ST (Exp)

### Origin and Breeding History

FG 98T091 ST is a synthetic variety with 234 parent plants that was developed by Forage Genetics International. Parent plants were selected from forage salt trials. Phenotypic selection was used to identify the parent plants (persistence, vigor and freedom from leaf diseases). The germplasm sources used in the development trace to Mireya (19%), Milonga (15%), DK 193 (14%), WL 903 (12%), Rosillo (12%), Bacana (8%), Beacon (7%), 59N49 (7%) and Coronado (6%). In 2007 Syn1 seed was produced near Marcos Juarez, Argentina, harvested in total on all parents and bulked to form breeder seed.

### Areas of Probable Adaptation

FG 98T091 ST is adapted to the winter active regions of Argentina. The variety has been tested in Argentina and intended use is in Argentina.

### Agronomic and Botanical Characteristics

FG 98T091 ST is very nondormant similar to the FD 9 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. This variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant to *Fusarium* wilt, Phytophthora root rot and Pea aphid, resistant to anthracnose; moderately resistant to bacterial wilt; with low resistance to *Aphanomyces* Root Rot (race 1). It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Seed increase is on a limited generation basis with one generation each of breeder and two generations of foundation classes and certified seed classes. Production of Syn 2 foundation seed requires consent of the breeder. Breeder seed (Syn1) was produced in 2007 near Marcos Juarez, Argentina. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if FG 98T091 ST is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013





## **PLUSS II**

**(Amended – Name Change)**

### **Breeding History:**

PLUSS II is a synthetic variety with 15 parent clones. Parent clones were selected for forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root knot nematode and Aphanomyces root rot (Race 1 and Race 2). A combination of genotypic and phenotypic selection was used to identify the parent plants.

### **Area of Probable Adaptation**

PLUSS II is adapted to the North Central and East Central regions. FG 45M323 has been tested in Nebraska, Wisconsin and New York and is intended for use in the North Central and East Central regions.

### **Agronomic and Botanical Characteristics**

PLUSS II is Moderately Fall Dormant similar to FD4 check. PLUSS II is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 75% purple, 23% variegated and 2% white with a trace of yellow and cream. PLUSS II has high multifoliolate leaf expression.

PLUSS II has high resistance to *Anthracnose* (Race 1), bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, *Phytophthora* root rot and *Aphanomyces* root rot (Race 1); with resistance to stem nematode and pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed (Syn1) was produced near Nampa, ID in 2005. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

### **Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2009.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name: PLUSS II Date submitted November 26, 2008

Experimental designations: FG 45M323

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## 6497R

### (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

#### Origin and Breeding History

6497R is a synthetic variety with 23 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

#### Areas of Probable Adaptation

6497R is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Indiana, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

#### Agronomic and Botanical Characteristics

6497R is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 96% purple, 1% variegated, 1% cream, 1% white and 1% yellow. This variety has high multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check.

6497R is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R46M197 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1); with resistance to stem nematode and pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

#### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

#### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

#### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name 6497R

Experimental Designation(s) FG R46M197

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# RR Stratica

## (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

RR Stratica is a synthetic variety with 55 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

RR Stratica is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

RR Stratica is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 97% purple, 2% variegated and 1% yellow with a trace of cream and white. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

RR Stratica is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R47M120 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and spotted alfalfa aphid; with resistance to stem nematode and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name        RR Stratica

Experimental Designation(s)    FG R47M120

Date NA&MLVRB first accepted this variety    January 2012

Date(s) previous amendments were accepted    \_\_\_\_\_

Date amendment submitted        November 28, 2012

Date recommended by the NVRB:    Jan 08, 2013



## DKA44-16

### (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

#### Origin and Breeding History

DKA44-16 is a synthetic variety with 75 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

#### Areas of Probable Adaptation

DKA44-16 is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

#### Agronomic and Botanical Characteristics

DKA44-16 is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 95% purple, 3% variegated, 1% white and 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

DKA44-16 is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. DKA44-16 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot and Aphanomyces root rot (Race 1); with resistance to stem nematode, spotted alfalfa aphid and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

#### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

#### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

#### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name DKA44-16

Experimental Designation(s) FG R47M312

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# PowerHouse RR

## (Amended – Forage Production Under Salt Stress)

### Origin and Breeding History

PowerHouse RR is a synthetic variety with 105 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

PowerHouse RR is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

PowerHouse RR is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 94% purple, 3% variegated, 1% white and 2% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety has improved forage yield under saline stress similar to the salt tolerant check.

PowerHouse RR is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. PowerHouse RR (FG R47M318) has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and stem nematode; with resistance to pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name      PowerHouse RR

Experimental Designation(s)      FG R47M318

Date NA&MLVRB first accepted this variety      January 2012

Date(s) previous amendments were accepted      \_\_\_\_\_

Date amendment submitted      November 28, 2012

Date recommended by the NVRB:      Jan 08, 2013



# WL 372HQ.RR

(Amended – Name Change)

## Origin and Breeding History

WL 372HQ.RR is a synthetic variety with 94 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

## Areas of Probable Adaptation

WL 372HQ.RR is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Indiana, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

## Agronomic and Botanical Characteristics

WL 372HQ.RR is Moderately Fall Dormant similar to FD5 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 93% purple, 3% variegated, 1% white and 3% yellow with a trace of cream. This variety has high multifoliolate leaf expression.

WL 372HQ.RR is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R47M324 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and stem nematode; with resistance to pea aphid and spotted alfalfa aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 372HQ.RR

Experimental Designation(s) FG R47M324

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# WL 356HQ.RR

(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

## Origin and Breeding History

WL 356HQ.RR is a synthetic variety with 55 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

## Areas of Probable Adaptation

WL 356HQ.RR is adapted to the North Central and East Central regions. This variety has been tested in Iowa, Pennsylvania and Wisconsin and is intended for use in the North Central and East Central regions.

## Agronomic and Botanical Characteristics

WL 356HQ.RR is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 97% purple, 2% variegated and 1% yellow with a trace of cream and white. This variety has high multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check.

WL 356HQ.RR is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R48A138 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1), Aphanomyces root rot (Race 2) and stem nematode; with resistance to pea aphid and moderate resistance to spotted alfalfa aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 356HQ.RR

Experimental Designation(s) FG R48A138

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# WL 352LH.RR

## (Amended – Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

WL 352LH.RR is a synthetic variety with 88 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI PLH resistant breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

WL 352LH.RR is adapted to the North Central and East Central regions. This variety has been tested in Iowa, Pennsylvania and Wisconsin and is intended for use in the North Central and East Central regions.

### Agronomic and Botanical Characteristics

WL 352LH.RR is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 88% purple, 10% variegated and 2% yellow with a trace of cream and white. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

WL 352LH.RR is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. WL 352LH.RR has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and potato leafhopper; with resistance to pea aphid, moderate resistance to stem nematode and low resistance to spotted alfalfa aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 352LH.RR

Experimental Designation(s) FG R48H401

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013





## **RR VaMoose**

**(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)**

### **Origin and Breeding History**

RR VaMoose is a synthetic variety with 58 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI PLH resistant breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### **Areas of Probable Adaptation**

RR VaMoose is adapted to the North Central and East Central regions. This variety has been tested in Iowa, Pennsylvania and Wisconsin and is intended for use in the North Central and East Central regions.

### **Agronomic and Botanical Characteristics**

RR VaMoose is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 86% purple, 12% variegated and 2% yellow with a trace of cream and white. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

RR VaMoose is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R48H408 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and potato leafhopper; with resistance to pea aphid and moderate resistance to stem nematode and spotted alfalfa aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name	<u>RR VaMoose</u>
Experimental Designation(s)	<u>FG R48H408</u>
Date NA&MLVRB first accepted this variety	<u>January 2012</u>
Date(s) previous amendments were accepted	<u></u>
Date amendment submitted	<u>November 28, 2012</u>
Date recommended by the NVRB:	<u>Jan 08, 2013</u>



# RR Presteez

(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

## Origin and Breeding History

RR Presteez is a synthetic variety with 98 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

## Areas of Probable Adaptation

RR Presteez is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Iowa, Washington, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

## Agronomic and Botanical Characteristics

RR Presteez is Fall Dormant similar to FD3 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 95% purple, 2% variegated, 2% yellow, 1% cream with a trace of white. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

RR Presteez is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. RR Presteez has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and pea aphid; with resistance to spotted alfalfa aphid and moderate resistance to stem nematode. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name        RR Presteez

Experimental Designation(s)    FG R48M137

Date NA&MLVRB first accepted this variety    January 2012

Date(s) previous amendments were accepted    \_\_\_\_\_

Date amendment submitted        November 28, 2012

Date recommended by the NVRB:        Feb 21, 2013



# RR NemaStar

## (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode)

### Origin and Breeding History

RR NemaStar is a synthetic variety with 107 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

This variety is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions. This variety has been tested in Washington and Idaho and is intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

Test variety is Moderately Fall Dormant similar to FD5 checks. Flower color (Syn2) is 97% purple and 3% variegated with a trace of cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R48W224 has moderate multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), Verticillium wilt and stem nematode; with resistance to pea aphid, root knot nematode (Northern *M. hapla*) and spotted alfalfa aphid. Reaction to blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name RR NemaStar

Experimental Designation(s) FG R48W224

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



**FG R56Bx214 (Exp)**  
**(Amended – Forage Production Under Salt Stress,  
Salt Tolerance of Germinating Alfalfa Seeds,  
Northern Root Knot Nematode)**

**Origin and Breeding History**

FG R56Bx214 is a synthetic variety with 37 parent plants. FG R56Bx214 is a synthetic variety with 37 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

**Areas of Probable Adaptation**

This variety is adapted to Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Colorado, Washington and Idaho and is intended for use in the Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

**Agronomic and Botanical Characteristics**

Test variety is Moderately Fall Dormant similar to FD4 checks. Flower color (Syn2) is 95% purple, 2% variegated, 2% cream, 1% white with a trace of yellow. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. FG R56Bx214 has moderate multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check. Test variety has improved forage yield under saline stress similar to the salt tolerant check.

This variety has high resistance to anthracnose (Race 1), Phytophthora root rot, Aphanomyces root rot, pea aphid, and stem nematode: with resistance bacterial wilt, Fusarium wilt, Verticillium wilt, Northern root knot nematode (*M. hapla*) and spotted alfalfa aphid. Reaction to blue alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

**Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name \_\_\_\_\_

Experimental Designation(s) FG R56Bx214

Date NA&MLVRB first accepted this variety January, 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# RR AphaTron

## (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

RR AphaTron is a synthetic variety with 90 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

RR AphaTron is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

### Agronomic and Botanical Characteristics

RR AphaTron is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 97% purple, 2% variegated and 1% yellow with a trace of cream and white. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

RR AphaTron is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R57A136 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and Aphanomyces root rot (Race 2); with resistance to stem nematode and pea aphid. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name RR AphaTron

Experimental Designation(s) FG R57A136

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# **RR Tonnica**

## **(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)**

### **Origin and Breeding History**

RR Tonnica is a synthetic variety with 105 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI Kansas-derived breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### **Areas of Probable Adaptation**

RR Tonnica is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

### **Agronomic and Botanical Characteristics**

RR Tonnica is Moderately Fall Dormant similar to FD5 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 94% purple, 3% variegated, 1% white and 2% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

RR Tonnica is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. FG R57K138 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot and Aphanomyces root rot (Race 1); with resistance to pea aphid and stem nematode. Reaction to spotted alfalfa aphid, root knot nematode (Northern M. hapla) and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name      RR Tonnica

Experimental Designation(s)      FG R57K138

Date NA&MLVRB first accepted this variety      January 2012

Date(s) previous amendments were accepted      \_\_\_\_\_

Date amendment submitted      November 28, 2012

Date recommended by the NVRB:      Jan 08, 2013



**AmeriStand 455TQ RR**  
**(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds,  
Northern Root Knot Nematode)**

**Origin and Breeding History**

AmeriStand 455TQ RR is a synthetic variety with 75 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI Kansas-derived breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

**Areas of Probable Adaptation**

AmeriStand 455TQ RR is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Pennsylvania, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

**Agronomic and Botanical Characteristics**

AmeriStand 455TQ RR is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 92% purple, 5% variegated, 1% white and 2% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

AmeriStand 455TQ RR is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG R57K337 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, root knot nematode (Northern *M. hapla*) and Aphanomyces root rot (Race 1); with resistance to pea aphid and stem nematode. Reaction to spotted alfalfa aphid and blue alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

**Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name AmeriStand 455TQ RR

Experimental Designation(s) FG R57K337

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# 6516R

## (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode)

### Origin and Breeding History

6516R is a synthetic variety with 15 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

This variety is adapted to the Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions. This variety has been tested in Kansas, Colorado, Washington and Idaho and is intended for use in Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions.

### Agronomic and Botanical Characteristics

Test variety is Moderately Fall Dormant similar to FD5 checks. Flower color (Syn2) is 89% purple 10% variegated, 1% yellow and trace of cream and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. 6516R has moderate multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), pea aphid, spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and stem nematode. Reaction to Verticillium wilt and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name 6516R

Experimental Designation(s) FG R57OK216

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013





# RR501

## (Amended – Forage Production Under Salt Stress, Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

RR501 (FG R57OK217) is a synthetic variety with 30 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

This variety is adapted to the Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions. This variety has been tested in Kansas, Colorado, Washington and Idaho and is intended for use in Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions.

### Agronomic and Botanical Characteristics

Test variety is Moderately Fall Dormant similar to FD5 checks. Flower color (Syn2) is 87% purple 10% variegated 2% yellow, 1% cream and trace of white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. FG R57OK217 has high multifoliolate leaf expression. Test variety has improved forage yield under saline stress similar to the salt tolerant check and exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), pea aphid and stem nematode. Reaction to Verticillium wilt, spotted alfalfa aphid, blue alfalfa aphid and root knot nematode has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name RR501

Experimental Designation(s) FG R57OK217

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## 6547R

### (Amended – Name Change, Forage Production Under Salt Stress, Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode)

#### Origin and Breeding History

6547R is a synthetic variety with 18 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

#### Areas of Probable Adaptation

This variety is adapted to the Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions. This variety has been tested in Kansas, Colorado, Washington and Idaho and is intended for use in Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions.

#### Agronomic and Botanical Characteristics

Test variety is Moderately Fall Dormant similar to FD5 checks. Flower color (Syn2) is 90% purple 3% variegated, 4% cream, 1% yellow and 2% white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. 6547R has high multifoliolate leaf expression. Test variety has improved forage yield under saline stress similar to the salt tolerant check and exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), root knot nematode (Northern *M. hapla*) and stem nematode; with resistance to Verticillium wilt and pea aphid. Reaction to spotted alfalfa aphid and blue alfalfa aphid has not been tested.

#### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

#### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

#### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name 6547R

Experimental Designation(s) FG R57W213

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



**Integra 8444R**  
**(Amended – Name Change, Forage Production Under Salt Stress,  
Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode)**

**Origin and Breeding History**

Integra 8444R is a synthetic variety with 37 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

**Areas of Probable Adaptation**

This variety is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions. This variety has been tested in Washington and Idaho and is intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

**Agronomic and Botanical Characteristics**

Test variety is Moderately Fall Dormant similar to FD4 checks. Flower color (Syn2) is 92% purple, 2% variegated, 2% cream, 2% yellow and 2% white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. Integra 8444R has moderate multifoliolate leaf expression. Test variety has improved forage yield under saline stress similar to the salt tolerant check and improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), Fusarium wilt, Phytophthora root rot, Verticillium wilt, spotted alfalfa aphid and stem nematode; with resistance to bacterial wilt, Aphanomyces root rot (race 1) and Northern (*M. hapla*) root knot nematode. Reaction to pea aphid and blue alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

**Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name Integra 8444R  
Experimental Designation(s) FG R58Hg236  
Date NA&MLVRB first accepted this variety January 2012  
Date(s) previous amendments were accepted \_\_\_\_\_  
Date amendment submitted November 28, 2012  
Date recommended by the NVRB: Feb 21, 2013



# **AmeriStand 715NT RR**

## **(Amended – Name Change, Forage Production Under Salt Stress)**

### **Origin and Breeding History**

AmeriStand 715NT RR is a synthetic variety with 56 parent plants developed by Forage Genetics. Parent plants contained both commercial Roundup Ready events (dihomogenic) and were selected from F1 progeny from a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2005.

### **Areas of Probable Adaptation**

This variety is adapted to Winterhardy Intermountain and Southwest regions. This variety has been tested in California and Idaho and is intended for use in the Winterhardy Intermountain and Southwest regions.

### **Agronomic and Botanical Characteristics**

Test variety is Non-Dormant similar to FD7 checks. Flower color (Syn2) is 100% purple, with a trace of variegated, cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. AmeriStand 715NT RR has moderate multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check. Test variety has improved forage yield under saline stress similar to the salt tolerant check.

This variety has high resistance to anthracnose (Race 1), Fusarium wilt, Phytophthora root rot, pea aphid, spotted alfalfa aphid, and stem nematode: with resistance to bacterial wilt, Verticillium wilt, and root knot nematode (Northern *M. hapla*). Reaction to Aphanomyces root rot and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name        AmeriStand 715NT RR

Experimental Designation(s)    FG R65BD279

Date NA&MLVRB first accepted this variety    January 2012

Date(s) previous amendments were accepted    \_\_\_\_\_

Date amendment submitted        November 28, 2012

Date recommended by the NVRB:        Feb 21, 2013



# RRALF 6R200

(Amended – Name Change, Northern Root Knot Nematode)

## Origin and Breeding History

RRALF 6R200 is a synthetic variety with 120 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

## Areas of Probable Adaptation

This variety is adapted to the Moderately Winterhardy Intermountain and Southwest regions. This variety has been tested in California and is intended for use in the Moderately Winterhardy Intermountain and Southwest regions.

## Agronomic and Botanical Characteristics

Test variety has fall dormancy similar to FD6 checks. Flower color (Syn2) is 99% purple, 1% variegated, with a trace of cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. RRALF 6R200 has moderate multifoliolate leaf expression and exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to anthracnose (Race 1), Fusarium wilt, pea aphid, spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and stem nematode: with resistance bacterial wilt, Verticillium wilt, and Phytophthora root rot. Reaction to Aphanomyces root rot and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name RRALF 6R200

Experimental Designation(s) FG R66Bx311

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FG R77T729 (Exp)

### Origin and Breeding History

R77T729 is a synthetic variety with 107 parent plants that was developed by Forage Genetics International. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: *Fusarium* wilt, *Phytophthora* root rot and stem nematode. A combination of Genotypic and Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to various FGI experimental populations (100%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

### Areas of Probable Adaptation

R77T729 is adapted to the Southwest U.S. This variety has been tested in California and intended use is the Southwest.

### Agronomic and Botanical Characteristics

R77T729 is nondormant similar to the FD 7 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. Test variety is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. This Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant to anthracnose, *Phytophthora* root rot, pea aphid, and stem nematode, resistant to bacterial wilt, *Fusarium* wilt and *Verticillium* wilt. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2007. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Production of Syn2 foundation seed requires the consent of the breeder. Production of foundation (Syn3) seed from foundation (Syn2) seed is not permitted. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if R77T729 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## WL 552HQ.RR

### Origin and Breeding History

WL 552HQ.RR (FG R78T823) is a synthetic variety with 10 parent plants that was developed by Forage Genetics International. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: spotted alfalfa aphid and stem nematode. A combination of Genotypic and Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to Triple Play (20%) and to various FGI experimental populations (80%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

WL 552HQ.RR (FG R78T823) is adapted to the Southwest U.S. The variety has been tested in California and intended use is the Southwest.

### Agronomic and Botanical Characteristics

WL 552HQ.RR (FG R78T823) is nondormant similar to the FD 8 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. Test variety is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. This variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant to Phytophthora root rot, spotted alfalfa aphid; resistant to anthracnose, bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, pea aphid and stem nematode. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Production of Syn2 foundation seed requires the consent of the breeder. Production of foundation (Syn3) seed from foundation (Syn2) seed is not permitted. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if WL 552HQ.RR (FG R78T823) is accepted for certification. The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information:

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information cannot be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# WL 662HQ.RR

## (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode, Blue Alfalfa Aphid Resistance)

### Origin and Breeding History

WL 662HQ.RR is a synthetic variety with 78 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

### Areas of Probable Adaptation

This variety is adapted to the Southwest region. This variety has been tested in California and Arizona and is intended for use in the Southwest region.

### Agronomic and Botanical Characteristics

Test variety is Very Non-Dormant similar to FD9 checks. Flower color (Syn2) is 100% purple with a trace of variegated, cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to Phytophthora root rot, spotted alfalfa aphid, blue alfalfa aphid, Northern root knot nematode (*M. hapla*) and pea aphid; with resistance to Fusarium wilt, Verticillium wilt and stem nematode; moderate resistance to anthracnose (Race 1) and bacterial wilt. Reaction to Aphanomyces root rot has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 662HQ.RR

Experimental Designation(s) FG R96Bx304

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013





# RR902

## (Amended – Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

RR902 is a synthetic variety with 73 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

### Areas of Probable Adaptation

This variety is adapted to the Southwest region. This variety has been tested in California and Arizona and is intended for use in the Southwest region.

### Agronomic and Botanical Characteristics

Test variety is Very Non-Dormant similar to FD9 checks. Flower color (Syn2) is 100% purple with a trace of variegated, cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

This variety has high resistance to Phytophthora root rot, spotted alfalfa aphid, and pea aphid; with resistance to Fusarium wilt, Verticillium wilt and stem nematode; moderate resistance to bacterial wilt; and low resistance to anthracnose (Race 1). Reaction to Aphanomyces root rot, blue alfalfa aphid and root knot nematode has not been tested.

### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name RR902

Experimental Designation(s) R96Bx301

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 30, 2012

Date recommended by the NVRB: Jan 08, 2013



# AmeriStand 415NT RR

## Origin and Breeding History

AmeriStand 415NT RR is a synthetic variety with 24 parent plants that was developed by Forage Genetics International. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, and Aphanomyces root rot (Race 1 and Race 2). A combination of Genotypic and Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to various FGI experimental populations (100%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

## Areas of Probable Adaptation

AmeriStand 415NT RR is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions of the U.S. and similar environments. The variety has been tested in Washington, Oregon and Idaho and intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

## Agronomic and Botanical Characteristics

AmeriStand 415NT RR is moderately fall dormant similar to the FD 4 check. Flower color (Syn 2) is 87% Purple, 10% Variegated, 2% Yellow, 1% Cream and a trace of White. It expresses a high degree of multifoliolate leafiness. Test variety is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

Test variety is highly resistant to anthracnose, bacterial wilt, *Fusarium* wilt, Phytophthora root rot, *Verticillium* wilt, *Aphanomyces* root rot (race 1), Pea aphid, Northern root knot nematode (*M. hapla*) and stem nematode. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

## Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2007. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Production of Syn2 foundation seed requires the consent of the breeder. Production of foundation (Syn3) seed from foundation (Syn2) seed is not permitted. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if AmeriStand 415NT RR is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

## PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information may not be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



**AmeriStand 803T**  
**(Amended – Blue Alfalfa Aphid Resistance)**

**Breeding History**

AmeriStand 803 T is a synthetic variety consisting of 300 parent plants. Plants were selected based on forage yield, fall dormancy reaction and persistence. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest regions.

**Agronomic and Botanical Characteristics**

Test variety is Non-Dormant similar to FD8 check. Flower Color (Syn2) is 100% purple with a trace of variegated, cream, white and yellow.

Test variety has high resistance to *Fusarium* wilt, *Phytophthora* root rot, pea aphid, root knot nematode (Northern *M. hapla*), stem nematode and blue alfalfa aphid; resistance to spotted alfalfa aphid, and moderate resistance to *Anthraco*se (Race 1) and bacterial wilt. Reaction to *Aphanomyces* root rot and *Verticillium* wilt has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder.

Breeder seed was produced in the field near Nampa, ID in 2003. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2009.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name AmeriStand 803T

Experimental Designation(s) FG 93T054

Date NA&MLVRB first accepted this variety January 2009

Date(s) previous amendments were accepted January 2010

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



**DG 9212**  
**(Amended – Name Change, Blue Alfalfa Aphid Resistance)**

**Breeding History**

DG 9212 is a synthetic variety consisting of 125 parent plants. Plants were selected based on forage yield, fall dormancy reaction, persistence and pest resistance. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest region.

**Agronomic and Botanical Characteristics**

Test variety is Very Non-Dormant similar to FD9 check. Flower Color (Syn2) is 100% purple with a trace of variegated, white, cream and yellow. Test variety has high multifoliolate leaf expression.

Test variety has high resistance to *Anthracnose* (Race 1), *Fusarium wilt*, *Phytophthora* root rot, pea aphid, spotted alfalfa aphid, blue alfalfa aphid and stem nematode and resistance to *Verticillium* wilt; low resistance to bacterial wilt. Reaction to *Aphanomyces* root rot and root knot nematode has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder.

Breeder seed was produced in the field near Nampa, ID in 2005. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2009.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name     DG 9212      
Experimental Designation(s)     FG 85M282      
Date NA&MLVRB first accepted this variety     January 2009      
Date(s) previous amendments were accepted     January 2010      
Date amendment submitted     November 28, 2012      
Date recommended by the NVRB:     Jan 08, 2013    



## Magnitude

(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)

### Origin and Breeding History

Magnitude is a synthetic variety with 14 parent clones. Forage Genetics experimental designation is FG 45M112. Parent clones were selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent clones. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2005.

### Areas of Probable Adaptation

Magnitude is adapted to the North Central, East Central and Great Plains. This variety has been tested in Nebraska, Iowa and Wisconsin and is intended for use in the North Central, East Central and Great Plains regions.

### Agronomic and Botanical Characteristics

Magnitude is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 94% purple, 3% variegated, 2% white, 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

Magnitude has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and stem nematode; with resistance to spotted alfalfa aphid and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2005. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name Magnitude

Experimental Designation(s) FG 45M112

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



# **LegenDairy XHD**

**(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds)**

## **Origin and Breeding History**

LegenDairy XHD is a synthetic variety with 65 parent plants that was developed by Forage Genetics International. Parent plants were selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

## **Areas of Probable Adaptation**

LegenDairy XHD is adapted to the North Central, East Central and Winterhardy Intermountain regions. This variety has been tested in New York, Idaho and Wisconsin and is intended for use in the North Central, East Central and Winterhardy Intermountain regions.

## **Agronomic and Botanical Characteristics**

LegenDairy XHD is Fall Dormant similar to FD3 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 94% purple, 3% variegated, 2% white, 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

LegenDairy XHD has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and pea aphid; with resistance to stem nematode and spotted alfalfa aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## **Procedures for Maintaining Seed Stock**

Breeder seed (Syn1) was produced near Nampa, ID in 2006. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

## **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

## **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name      LegenDairy XHD

Experimental Designation(s)      FG 46M126

Date NA&MLVRB first accepted this variety      January 2012

Date(s) previous amendments were accepted      \_\_\_\_\_

Date amendment submitted      November 28, 2012

Date recommended by the NVRB:      Jan 08, 2013



**Premium**  
**(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds,  
Northern Root Knot Nematode)**

**Breeding History**

Premium is a synthetic variety consisting of 110 parent plants that was developed by Forage Genetics International. Plants were selected based on forage yield, fall dormancy reaction, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, stem nematode and Phytophthora root rot. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Idaho, Washington and Colorado and is intended for use in the Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

**Agronomic and Botanical Characteristics**

This variety is Moderately Dormant similar to FD5 check. Flower Color (Syn2) is 94% purple, 4% variegated, 1% cream, 1% white and a trace of yellow. Test variety has high multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces (Race 1), spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and stem nematode; with resistance to anthracnose (Race 1), and pea aphid. Reaction to blue alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2006. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2010.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name Premium  
Experimental Designation(s) FG 46W202  
Date NA&MLVRB first accepted this variety January 2010  
Date(s) previous amendments were accepted \_\_\_\_\_  
Date amendment submitted November 28, 2012  
Date recommended by the NVRB: Feb 21, 2013



**6401N**  
**(Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds,  
Northern Root Knot Nematode)**

**Origin and Breeding History**

6401N is a synthetic variety with ten parent plants developed by Forage Genetics. Parent plants were selected for resistance to one or more of the following pests: Fusarium wilt, Verticillium wilt, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

**Areas of Probable Adaptation**

6401N is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions. It has been tested in Idaho and Colorado and is intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

**Agronomic and Botanical Characteristics**

6401N is Moderately Fall Dormant similar to FD4 check. Flower Color (Syn2) is 97% purple, 1% variegated, 1% yellow and 1% white with a trace cream. 6401N has moderate multifoliolate leaf expression. Test variety exhibits salt tolerance in germinating seeds similar to the tolerant check.

6401N has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, pea aphid, root knot nematode (Northern *M. hapla*) and stem nematode; with resistance to Aphanomyces root rot (Race 1). Reaction to spotted alfalfa aphid and blue alfalfa aphid has not been tested.

**Procedures for Maintaining Seed Stock**

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

**Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name      6401N

Experimental Designation(s)      FG 48W201

Date NA&MLVRB first accepted this variety      January 2012

Date(s) previous amendments were accepted      \_\_\_\_\_

Date amendment submitted      November 28, 2012

Date recommended by the NVRB:      Feb 21, 2013





## **Integra 8420**

**(Amended – Name Change, Northern Root Knot Nematode)**

### **Origin and Breeding History**

Integra 8420 is a synthetic variety with 17 parent plants developed by Forage Genetics. Parent plants were selected for resistance to one or more of the following pests: Fusarium wilt, Verticillium wilt, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### **Areas of Probable Adaptation**

Integra 8420 is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions. It has been tested in Idaho and Colorado and is intended for use in the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions.

### **Agronomic and Botanical Characteristics**

Integra 8420 is Moderately Fall Dormant similar to FD4 check. Flower Color (Syn2) is 96% purple, 2% variegated, 1% yellow and 1% white with a trace cream. Integra 8420 has moderate multifoliolate leaf expression.

Integra 8420 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1), root knot nematode (Northern *M. hapla*) and stem nematode; with resistance to pea aphid. Reaction to Verticillium wilt, spotted alfalfa aphid and blue alfalfa aphid has not been tested.

### **Procedures for Maintaining Seed Stock**

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

### **PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name Integra 8420

Experimental Designation(s) FG 48W202

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## 6906N

### (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds, Blue Alfalfa Aphid Resistance)

#### Breeding History

6906N is a synthetic variety consisting of 136 parent plants. Plants were selected based on fall dormancy reaction, persistence and for Phytophthora root rot resistance. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

#### Area of Probable Adaptation

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest.

#### Agronomic and Botanical Characteristics

This variety is Very Non-Dormant similar to FD 9 check. Flower Color (Syn2) is 100% purple with a trace of variegated, white, cream and yellow. 6906N exhibits salt tolerance in germinating seeds similar to the tolerant check.

This variety has high resistance to Fusarium wilt, pea aphid, spotted alfalfa aphid, stem nematode and blue alfalfa aphid; resistance to anthracnose (Race 1) and Phytophthora root rot, with moderate resistance to bacterial wilt. Reaction to Verticillium wilt, Aphanomyces root rot and root knot nematode has not been tested.

#### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2006. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

#### Date Certified Seed to be First Offered for Sale:

Certified seed will be marketed in 2010.

#### PVP Information:

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name 6906N

Experimental Designation(s) FG 96T706

Date NA&MLVRB first accepted this variety January 2010

Date(s) previous amendments were accepted January 2012

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Jan 08, 2013



## AmeriStand 915TS RR

### (Amended – Name Change, Salt Tolerance of Germinating Alfalfa Seeds, Northern Root Knot Nematode, Blue Alfalfa Aphid Resistance)

#### Origin and Breeding History

AmeriStand 915TS RR is a synthetic variety with 8 parent plants developed by Forage Genetics. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

#### Areas of Probable Adaptation

This variety is adapted to the Southwest region. This variety has been tested in California and Arizona and is intended for use in the Southwest region.

#### Agronomic and Botanical Characteristics

Test variety is Very Non-Dormant similar to FD9 checks. Flower color (Syn2) is 100% purple with a trace of variegated, cream, yellow and white. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

This variety has high resistance to Phytophthora root rot, spotted alfalfa aphid, pea aphid, blue alfalfa aphid and Northern root knot nematode (*M. hapla*); with resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt and stem nematode; and moderate resistance to Verticillium wilt. Reaction to Aphanomyces root rot has not been tested.

#### Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

#### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2012.

Certified seed production acreage may be published by AOSCA and member agencies.

#### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name AmeriStand 915TS RR

Experimental Designation(s) FG R96Bx308

Date NA&MLVRB first accepted this variety January 2012

Date(s) previous amendments were accepted \_\_\_\_\_

Date amendment submitted November 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## FSG 424

### Origin and Breeding History

FSG 424 is a synthetic variety with 59 parent clones that was developed by Forage Genetics International. Forage Genetics International experimental designation is FG 48A176. Parent plants were selected for resistance to *Aphanomyces* root rot resistance (Race 1 and Race2) from FGI breeding populations previously selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and *Aphanomyces* root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

FSG 424 is adapted to the North Central and East Central regions. This variety has been tested in Minnesota, Pennsylvania, Iowa and Wisconsin and is intended for use in the North Central and East Central.

### Agronomic and Botanical Characteristics

FSG 424 is Moderately Fall Dormant similar to FD4 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 96% purple, 2% variegated, 1% white and 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

FSG 424 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, *Aphanomyces* root rot (Race 1) and *Aphanomyces* root rot (Race 2); with resistance to pea aphid and stem nematode. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# Gemstone

## Origin and Breeding History

Gemstone is a synthetic variety with 9 parent clones that was developed by Forage Genetics International. Forage Genetics International experimental designation is FG 46M446. Parent clones were selected for forage yield, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode and Aphanomyces root rot (Race 1 and Race 2). A combination of phenotypic and genotypic selection was used to identify the parent clones. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

## Areas of Probable Adaptation

Gemstone is adapted to the North Central, East Central and Winterhardy Intermountain regions. This variety has been tested in New York, Idaho and Wisconsin and is intended for use in the North Central, East Central and Winterhardy Intermountain regions.

## Agronomic and Botanical Characteristics

Gemstone is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 96% purple, 2% variegated, 1% white, 1% yellow with a trace of cream. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

Gemstone has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and spotted alfalfa aphid; with resistance to stem nematode and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2006. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# PureGold

## Origin and Breeding History

PureGold is a synthetic variety with 105 parent plants that was developed by Forage Genetics International. Forage Genetics International experimental designation is FG R46BD178. Parent plants contained both commercial Roundup Ready events (J101/J163 dihomogenic) and were selected from F1 progeny of a cross between two populations previously selected for glyphosate tolerance, forage yield, forage quality, persistence and/or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

## Areas of Probable Adaptation

FG PureGold is adapted to the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions. This variety has been tested in Washington, Indiana, Idaho and Wisconsin and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain and Winterhardy Intermountain regions.

## Agronomic and Botanical Characteristics

FG PureGold is Moderately Fall Dormant similar to FD4 check. Test variety is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 96% purple, 1% variegated, 1% cream, 1% white and 1% yellow. This variety has high multifoliolate leaf expression. Variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

FG PureGold is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. FG PureGold has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1) and spotted alfalfa aphid; with resistance to stem nematode and pea aphid. Reaction to root knot nematode (Northern *M. hapla*) and blue alfalfa aphid has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation each of breeder and foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3) classes will be recognized. Production of Syn 2 foundation seed requires consent of the breeder. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively. At least one glyphosate application is required during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety).

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

## PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



# RRALF 9R100

## Origin and Breeding History

RRALF 9R100 is a synthetic variety with 8 parent plants that was developed by Forage Genetics International. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: *Fusarium* wilt, *Phytophthora* root rot and stem nematode. A combination of Genotypic and Phenotypic selection was used to identify the parent plants. The germplasm sources used in the development trace to WL 625HQ (40%) and to various FGI experimental populations (60%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2007.

## Areas of Probable Adaptation

RRALF 9R100 is adapted to the Southwest U.S. and similar environments. The variety has been tested in California and Arizona and is intended for use in the Southwest.

## Agronomic and Botanical Characteristics

RRALF 9R100 is very nondormant similar to the FD 9 check. Flower color (Syn 2) is 100% Purple, with a trace of Variegated, Yellow, Cream and White. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. This variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

The variety is highly resistant *Fusarium* wilt, *Phytophthora* root rot, pea aphid, spotted alfalfa aphid, blue alfalfa aphid and stem nematode; with resistant to anthracnose, bacterial wilt and *Verticillium* wilt. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

## Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2007. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2) seed for the projected life of the variety. Production of Syn2 foundation seed requires the consent of the breeder. Production of foundation (Syn3) seed from foundation (Syn2) seed is not permitted. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so that *cp4-epsps* null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if RRALF 9R100 is accepted for certification agencies.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

## PVP Information:

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information may not be provided to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## Spredor 5

### Origin and Breeding History

Spredor 5 is a synthetic variety with 41 parent plants that was developed by Forage Genetics International. Forage Genetics International experimental designation is FG 36C100. Parent plants were selected for winter survival in a Manitoba nursery from FGI breeding populations previously selected for forage yield, forage quality, persistence under grazing and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2006.

### Areas of Probable Adaptation

Spredor 5 is adapted to the North Central region. This variety has been tested in Minnesota and Wisconsin and is intended for use in the North Central region.

### Agronomic and Botanical Characteristics

Spredor 5 is Fall Dormant similar to FD2 check. Test variety is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 63% purple, 34% variegated, 3% yellow with a trace of cream and white. Variety has salt tolerance of germinating alfalfa seeds similar to the tolerant check.

Spredor 5 has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot and Aphanomyces root rot (Race 1); with resistance to pea aphid. Reaction to root knot nematode (Northern *M. hapla*), spotted alfalfa aphid, stem nematode and blue alfalfa aphid has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2006. Forage Genetics will maintain sufficient breeder (Syn1) and/or foundation (Syn2 or Syn3) seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013





**Sun Quest**  
**(Amended – Blue Alfalfa Aphid Resistance)**

**Breeding History**

Sun Quest is a synthetic variety consisting of 85 parent plants developed by Forage Genetics. Plants were selected based on fall dormancy reaction, persistence and for Phytophthora root rot resistance. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest region. This variety has been tested in California and is intended for use in the Southwest.

**Agronomic and Botanical Characteristics**

Test variety is Very Non-Dormant similar to FD 9 check. Flower Color (Syn2) is 100% purple with a trace of variegated, white, cream and yellow. Test variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

Test variety has high resistance to Phytophthora root rot, pea aphid, spotted alfalfa aphid, blue alfalfa aphid and stem nematode; resistance to anthracnose (Race 1) and Fusarium wilt, with moderate resistance to bacterial wilt. Reaction to Verticillium wilt, Aphanomyces root rot and root knot nematode has not been tested.

**Certified Seed Availability and Publication of Certified seed Production:**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2006. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date certified seed to be first offered for sale:**

Certified seed will be marketed in 2010.

Certified seed production acreage may not be published by AOSCA and member agencies.

**PVP Information:**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name	<u>Sun Quest</u>
Experimental Designation(s)	<u>FG 96T707</u>
Date NA&MLVRB first accepted this variety	<u>November 30, 2009</u>
Date(s) previous amendments were accepted	<u>January 2011, 2012</u>
Date amendment submitted	<u>November 28, 2012</u>
Date recommended by the NVRB:	<u>Feb 21, 2013</u>



**WL 656HQ**  
**(Amended – Blue Alfalfa Aphid Resistance)**

**Breeding History**

WL 656HQ is a synthetic variety consisting of 120 parent plants developed by Forage Genetics. Plants were selected based on forage yield, fall dormancy reaction, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, stem nematode and Phytophthora root rot. A combination of genotypic and phenotypic recurrent selection was used in the development of this variety.

**Area of Probable Adaptation**

This variety is adapted to the Southwest. This variety has been tested in California and is intended for use in the Southwest.

**Agronomic and Botanical Characteristics**

Test variety is Very Non-Dormant similar to FD9 check. Flower Color (Syn2) is 100% purple, with a trace of variegated, white, cream and yellow. Test variety has improved salt tolerance of germinating alfalfa seeds similar to the tolerant check.

Test variety has high resistance to Fusarium wilt, Phytophthora root rot, pea aphid, spotted alfalfa aphid, blue alfalfa aphid and stem nematode; with resistance to anthracnose (Race 1); and moderate resistance to bacterial wilt. Reaction to Verticillium wilt, Aphanomyces root rot and root knot nematode has not been tested.

**Certified Seed Availability and Publication of Certified seed Production**

Seed increase is on a limited generation basis with one generation of breeder and two generations of foundation and certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3), and certified (Syn 3 or Syn 4) classes will be recognized. Production of Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa, ID in 2005. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

**Date Certified Seed to be First Offered for Sale**

Certified seed will be marketed in 2010.

**PVP Information**

No decision has been made concerning Plant Variety Protection Act.

The information in this application may not be forwarded to the PVP office.

Variety Name WL 656HQ  
Experimental Designation(s) FG 95T284  
Date NA&MLVRB first accepted this variety January 2010  
Date(s) previous amendments were accepted January 2012  
Date amendment submitted November 28, 2012  
Date recommended by the NVRB: Feb 21, 2013



## 55VR05

### Origin and Breeding History

55VR05 (experimental designation – R48W221) is a synthetic variety from 10 replications of 18 parent plants. Parent plants contain the commercial Roundup Ready event J101 and were selected from FGI breeding lines for glyphosate tolerance, forage yield, persistence and/or resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose, Phytophthora root rot, stem nematode, and Aphanomyces root rot (Race 1 and Race 2). Phenotypic selection was used to identify the parent plants. The following germplasm sources were used in the development of this variety: various FGI experimental populations (100%). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2008.

### Areas of Probable Adaptation

55VR05 is adapted to the Winterhardy Intermountain and Moderately Winterhardy Intermountain regions of the US. The variety has been tested in Idaho and Washington and is intended for use in the Winterhardy Intermountain, Moderately Winterhardy Intermountain, North Central, East Central and the Great Plains regions of the US.

### Agronomic and Botanical Characteristics

55VR05 is moderately fall dormant similar to the FD 5 check. Flower color (Syn 2) is 89% Purple, 8% Variegated, 1% Yellow, 1% Cream and 1% White. Test variety is “Roundup Ready®” expressing tolerance to Roundup® herbicide conferred by the cp4-epsps transgene. 55VR05 expresses a moderate degree of multifoliolate leafiness.

The variety is highly resistant to anthracnose, bacterial wilt, *Fusarium* wilt, Phytophthora root rot, *Verticillium* wilt, *Aphanomyces* root rot (race 1), Northern root knot nematode (*M. hapla*) and stem nematode with resistance to pea aphid and spotted alfalfa aphid. It has not been tested for other pest reactions. This variety is suitable for use in producing hay, haylage, greenchop, and dehydrated product.

### Procedures for Maintaining Seed Stock

Breeder seed (Syn1) was produced near Nampa, ID in 2008. Pioneer Hi-Bred will maintain sufficient foundation (Syn3) seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 6 years respectively.

The breeder requires that at least one glyphosate application be made during early stand establishment so that cp4-epsps null segregant plants are removed from the seed field prior to pollination. (Null segregant plants are the plants that do not contain the Roundup Ready® trait due to normal genetic segregation in this variety.) The Roundup Ready® trait is a patent protected trait; any and all seed increase on this variety requires a FGI seed production contract for Roundup Ready Alfalfa.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be available for sale in 2013 if 55VR05 is accepted for certification.

The applicant requests that certified seed acreage not be published by AOSCA and its agencies.

### PVP Information

No decision has been made regarding submission of an application for Plant Variety Protection. If application is made, the Title V certification option will not be selected.

Descriptive information can be provided to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 21, 2013



# FSG 403LR

## Origin and Breeding History

FSG 403LR (experimental names: 09W08PY and W08PY187) is an intercross of 99 parent plants selected by Pioneer Hi-Bred International from Pioneer experimentals for forage yield, persistence, forage quality, standability and or resistance to one or more of the following pests: bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, anthracnose (Race 1), *Phytophthora* root rot, *Aphanomyces* root rot (Race 1 & 2), and stem nematode. Parent clones were identified using phenotypic selection in selection nurseries for standability (lodging tolerance) forage quality, increased pectin, persistence, agronomic characteristics, and improved forage yield. Breeder seed was first produced in the winter of 2008-09.

## Areas of Probable Adaptation

FSG 403LR is adapted to the North Central, East Central, & Moderately Winterhardy Intermountain regions of the US. This variety has been tested in Wisconsin, Washington, Minnesota, Michigan and Pennsylvania and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain, Winterhardy Intermountain and Great Plains regions of the US and Canada.

## Agronomic and Botanical Characteristics

FSG 403LR is Moderately Dormant, similar to FD4 check. Flower color (Syn 2) is 90% purple, 10% variegated with a trace of yellow, cream and white.

FSG 403LR is highly resistant to *Anthracnose* (Race 1), *Aphanomyces* root rot (Race 1), bacterial wilt, *Verticillium* wilt, and *Phytophthora* root rot; with resistance to *Fusarium* wilt, *Aphanomyces* root rot (Race 2), stem nematode, pea aphid, lodging and spotted alfalfa aphid. Reaction to blue alfalfa aphid and root-knot nematode (*M. hapla*) has not been tested.

## Procedures for Maintaining Seed Stock

Seed increase is on a limited generation basis with one generation of breeder, three generations of foundation and three generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2, Syn 3 or Syn 4) and certified (Syn 3, Syn 4 or Syn 5) classes will be recognized. Breeder seed was first produced in the winter of 2008-09. Pioneer Hi-Bred International will maintain sufficient foundation seed for the projected life of the variety. Stands of foundation and certified seed fields are limited to 3 and 5 years, respectively.

## Certified Seed Availability and Publication of Certified Seed Production

Certified seed may be marketed in 2013.

Certified seed production acreage may not be published by AOSCA and/or member agencies.

## PVP Information

Application for Plant Variety Protection may be made and the certification option will not be requested. As a means of added varietal protection, information included with the Application for Review of Alfalfa Varieties for Certification may be provided to the PVP office.

Date this application was submitted: Nov 27, 2012

Date recommended by the NVRB: Feb 21, 2013



## SW 9812

### Origin and Breeding History

This synthetic variety, SW 9812, was developed by S&W Seed Company, Bob Sheesley, and Tim Jacobsen, using the outdoor cages crossing method with both honey bees and leaf cutting bees from selections from two parent lines. The selection criteria used in the development of this variety include forage yield and resistance to Spotted Alfalfa Aphid, Bacterial Wilt, Fusarium Wilt, Pea Aphid, Phytophthora Root Rot, Blue Alfalfa Aphid, and Stem Nematode. Breeder seed was produced in 2008.

### Areas of Probable Adaptation

SW 9812 is adapted to the Southwestern region. This variety has been tested in the Central Valley of California and Tucson, Arizona and is intended for use in the Southwest area.

### Agronomic and Botanical Characteristics

This variety is a non-dormant similar to FD 9 check. Flower color (Syn 2) is 98% purple and 2% variegated. SW 9812 has high resistance to Spotted Alfalfa Aphid: with resistance to Bacterial Wilt and Fusarium Wilt, Pea Aphid, and moderate resistance to Phytophthora Root Rot, Blue Alfalfa Aphid, and Stem Nematode. Reaction to Aphanomyces root rot, Root Knot nematode, Verticillium Wilt, and Anthracnose has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed was produced in 2008. S & W Seed Company will maintain sufficient breeder seed (Syn 2) in cold storage in the applicant's research facility. Under certification, the classes of seed will be breeder (Syn 2), foundation (Syn 3 or Syn 4), and certified (Syn 3 or Syn 4 or Syn 5). Stands of foundation and certified seed fields are limited to 4 and 6 years, respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013. Certified seed acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act. The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 06, 2013



## SW 9813

### Origin and Breeding History

This synthetic variety, SW 9813, was developed by S&W Seed Company, Bob Sheesley, and Tim Jacobsen, using the outdoor cages crossing method with both honey bees and leaf cutting bees from selections from two parent lines. The selection criteria used in the development of this variety include forage yield and resistance to Blue Alfalfa Aphid, Bacterial Wilt, Fusarium Wilt, Phytophthora Root Rot, Pea Aphid, Spotted Alfalfa Aphid, and Stem Nematode. Breeder seed was produced in 2008.

### Areas of Probable Adaptation

SW 9813 is adapted to the Southwestern region. This variety has been tested in the Central Valley of California and Tucson, Arizona and is intended for use in the Southwest area.

### Agronomic and Botanical Characteristics

This variety is a non-dormant similar to FD 9 check. Flower color (Syn 2) is 98% purple, 1.5% variegated, and 0.5% white. SW 9813 has high resistance to Blue Alfalfa Aphid; with resistance to Bacterial Wilt, Fusarium Wilt, Phytophthora Root Rot, Pea Aphid, and Spotted Alfalfa Aphid; moderate resistance to Stem Nematode. Reaction to Aphanomyces root rot, Root Knot nematode, Verticillium Wilt, and Anthracnose has not been tested.

### Procedures for Maintaining Seed Stock

Breeder seed was produced in 2008. S & W Seed Company will maintain sufficient breeder seed (Syn 2) in cold storage in the applicant's research facility. Under certification, the classes of seed will be breeder (Syn 2), foundation (Syn 3 or Syn 4), and certified (Syn 3 or Syn 4 or Syn 5). Stands of foundation and certified seed fields are limited to 4 and 6 years, respectively.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed will be marketed in 2013. Certified seed acreage may not be published by AOSCA and member agencies.

### PVP Information

No decision has been made concerning Plant Variety Protection Act. The information in this application may not be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 06, 2013



## Highline

### (Amended – Seed Class, Age, Stand, Areas of Production for Each Class)

#### Origin and Breeding History

The cultivar Highline (Experimental designation UC-340) is a broad based germplasm pool developed by a combination of phenotypic recurrent selection and modified convergent improvement using 21 different source pools in the University of California alfalfa breeding program. The component populations had previously been selected for resistance to scald, saline soil conditions, smog, root knot nematode (*Meloidogyne* sp.), Phytophthora root rot (*Phytophthora megasperma*), anthracnose (*Colletotrichum trifolii*), Downy mildew (*Peronospora trifoliorum*), bacterial wilt (*Clavibacter insidiosum*), a root rot complex including Stagonospora (*Stagonospora meliloti*) and Fusarium root rot (*Fusarium oxysporum*), blue alfalfa aphid (*Acyrtosiphon kondoi*), Pea aphid (*Acyrtosiphon pisum*), and spotted alfalfa aphid (*Threioaphis maculata*). This germplasm pool is composed of: 0%, *M. falcata*; 0%, Ladak; 0%, *M. varia*; 8%, Turkistan; 0%, Flemish; 7%, Chilean; 0%, Peruvian; 19%, Indian; 46%, African; 3%, Arabian; and 16%, unknown sources of germplasm. Breeder seed was first produced in 1983.

#### Areas of Probable Adaptation

This cultivar is adapted to Low Desert irrigated production areas. It has been tested in the Imperial Valley of California and the Central Valley of California (San Joaquin and Sacramento Valleys). It is intended for hay, haylage, greenchop, or dehydration. The target market area will be the Low Desert irrigated alfalfa production areas of California.

#### Agronomic and Botanical Characteristics

This cultivar is very nondormant (group 9), Flower color is predominantly purple (99+%) with a trace of Variegated types (> 0.5%). Flower color data were determined on both the Syn. 1 (UC-339) and Syn. 2 (UC-340) generations.

It is highly resistant to Fusarium wilt (*Fusarium oxysporum*), pea aphid (*Acyrtosiphon pisum*), spotted alfalfa aphid (*Threioaphis maculata*), and root knot nematode (*Meloidogyne incognita*). It is resistant to Phytophthora root rot (*Phytophthora megasperma* and blue alfalfa aphid (*Acyrtosiphon kondoi*)). It is susceptible to southern anthracnose (*Colletotrichum trifolii*) (Race 1), and bacterial wilt (*Clavibacter insidiosum*). This cultivar has resistance to Verticillium wilt (*Verticillium albo-atrum*) and Aphanomyces root rot (Race 1) (*Aphanomyces euteiches*) is unknown.

#### Procedures for Maintaining Seed Stock

Seed classes of this cultivar will be Breeder (produced in a field isolation in 1983), Foundation and Certified. Breeder and Foundation seed classes will be maintained by the University of California Foundation Seed Project, Davis or its designee. Breeder seed is limited to that produced at the Desert Research and Extension Center in 1983. Foundation and Certified seed is limited to a 2- and 6-year stand life, respectively. Seed production of the Foundation and Certified classes is limited to the San Joaquin Valley of California south of 37°25'N latitude and Riverside and Imperial counties of California south of 34°00'N latitude. If the supply of Breeder seed should become depleted, a selected lot of Foundation seed will be set aside and used to produce subsequent Foundation seed.

#### Certified Seed Availability and Publication of Certified Seed Production

Highline was first accepted by the NA&MLVRB on January 9, 1996 and was amended in March 1997. If approved for certification. Certified seed was first offered for sale in 1997.

#### PVP Information

PVP Certificate number: 9800030 issued February 6, 2007 with Title V

Variety Name Highline

Experimental Designation(s) UC-340

Date NA&MLVRB first accepted this variety January 9, 1996

Date(s) previous amendments were accepted March 1997

Date amendment submitted November 20, 2012

Date recommended by the NVRB: Jan 08, 2013



## DFRC1 or WI-RC-1 (Exp)

### Origin and Breeding History

DFRC1 is a 144 parent synthetic produced under isolated insect pollinated field conditions in Nampa, ID in 2009 by bulk harvesting seed off of parental plants. The 144 parents were obtained from equal number of plants grown from remnant seed of six halfsib families out of synthetic C328-05 (C328-05-A05, C328-05-B05, C328-05-B03, C328-05-C12, C328-05-F02, and C328-05-F10). C328-05 is a 96 parent synthetic produced at Prairie du Sac, WI in 2005 under screen isolated bumble bee pollinated field conditions, with maternal halfsib seed harvested from each plant. Twelve space planted progeny plants of the highest 71 seed yielding maternal halfsib families were evaluated at the US Dairy Forage Research Center Farm at Prairie du Sac, WI for biomass accumulation and persistence using visual rating scores from 2006 through 2009. Remnant seed of the top six performing maternal halfsib families based on 2006 to 2008 field data were used as parents of DFRC1. The 96 parents of C328-05 were obtained from Syn 2 seed of C328 an experimental variety developed in the US Dairy Forage Research Center red clover breeding program. C328 is a 35 parent synthetic produced under screened isolated pollination conditions at the University of Wisconsin Agricultural Research Station in Arlington, WI in 1990. The 35 parents of C328 were dug in 1989 out of a 4 year old 1986 established sward experimental variety trial at the University of Wisconsin Agricultural Research Station in Marshfield, WI out of plots from experimental populations C11, HC29 (Syn 2 of C827), and HC30 (Syn 2 of C813) developed in the US Dairy Forage Research Center red clover breeding program. C11 is a 1984 synthetic based on progeny selected out of C827 from a 1981 established trial. C827 is 45 parent synthetic of plants dug out of Marshfield, WI swards in 1979. C813 is a 1979 created synthetic based on red clover selections made in 1978 at Arlington, WI. The 2009 Nampa, ID polycross was used to generate Syn 1 breeder seed.

### Areas of Probable Adaptation

DFRC1 is adapted to the cool humid regions of United States. This variety has been tested in Indiana, Michigan, New York, and Wisconsin. DFRC1 is intended for use in its area of adaptation.

### Agronomic and Botanical Characteristics

Classification: Medium

Productive Persistence: Perennial

Ploidy: Diploid

Flower Color: Red

% Flowering Seedling Year: 100%

% Leaf Marking at 50% Flowering: 62%

Stem Hairiness: 100%

Description of Variants:

### Additional description and/or information about physiology, pest reaction, and other varietal attributes:

DFRC1 good forage yield, persistence, high frequency of non-leaf-mark plants, and a darker-green less green-yellow foliage color.

### Procedures for Maintaining Seed Stock

Seed increase of DFRC1 is on a limited generation basis with two generations of breeder seed class, two generations of foundation seed class, and three generations of certified seed class allowed. Syn 1 breeder seed was produced in Nampa, ID in 2009. Breeder (Syn 1 or Syn 2), foundation (Syn 2 or Syn 3), and certified (Syn 2, Syn 3, or Syn 4) classes of seed will be recognized. Production of Syn 2 breeder seed requires consent of the breeder. Stands of breeder, foundation, and certified seed are limited to 2 years. Sufficient breeder seed will be maintained by the US Dairy Forage Research Center in Madison, WI for the life of the variety.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed of DFRC1 will be available in 2015.

### PVP Information

PVP protection will be sought for DFRC1. Title V certification will not be sought for DFRC1. AOSCA may provide descriptive information about this variety to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013





## FSG 402 (Red Clover)

### Origin and Breeding History

FSG 402 medium red clover was developed using phenotypic recurrent selection. A total of 214 plants were selected from a 4<sup>th</sup> year fusarium wilt spaced-plant nursery in Indiana from the following sources: Rocket, and 3 elite breeding lines. These plants were intercrossed, and the resulting population screened two cycles for resistance to Mycoleptodiscus root rot in the greenhouse at Buck Creek, IN. Approximately 400 resistant plants from the second cycle of screening were placed in an isolated crossing block at Buck Creek, IN, and bulk-harvested as breeder seed (syn-1) in 2007.

### Areas of Probable Adaptation

FSG 402 is adapted to the east central United States, and is intended for use in that area. It has been tested in Indiana, Kentucky, Pennsylvania, Tennessee, and Virginia.

### Agronomic and Botanical Characteristics

Classification: double cut (medium)

Productive Persistence: perennial

Ploidy: diploid

Flower Color: 7% red, 24% dark pink,

% Flowering Seeding Year: 62

42% medium pink, 27% light pink

Stem Hairiness: 92%, with 89% perpendicular or pointing down, 3% pointing up

% Leaf Marking at 50% Flowering: 89

Description of Variants: 8% of plants without stem hairs; 11% without leaf marks.

**Additional description:** FSG 402 is highly resistant to northern and southern anthracnose and powdery mildew.

### Procedures for Maintaining Seed Stock

Seed increase of FSG 402 is limited to two generations each of breeder (Syn-1 or Syn-2), foundation (Syn-2 or Syn-3), and certified (Syn-3 or Syn-4) classes. Breeder seed was produced in 2007 (Syn-1) and 2011 (Syn-2) sufficient for the life of the variety, and will be maintained by FFR Cooperative. Length of stand allowed is 2 years and 3 years each for the foundation and certified classes, respectively. Production of foundation seed is limited to the states of Idaho, Oregon, Washington, and Wyoming in the northwest United States.

### Certified Seed Availability and Publication of Certified Seed Production

Certified seed of FSG 402 will be available in 2014. Certified seed production acreage may not be published by AOSCA and member agencies.

### PVP Information

Application will not be made for Plant Variety Protection. Information in this application may be forwarded to the PVP office.

Date this application was submitted: Nov 28, 2012

Date recommended by the NVRB: Feb 21, 2013



## **Gallant (Red Clover)** (Amended – Name Change)

### **Origin and Breeding History**

Gallant medium red clover was developed using phenotypic recurrent selection. A total of 56 plants were selected from a 2-year old beef cattle grazing trial in Kentucky from the following sources: Rocket and one FFR breeding line. These plants were intercrossed, and the resulting population screened two cycles for resistance to *Mycoleptodiscus* root rot in the greenhouse at Buck Creek, IN. Approximately 400 resistant plants from the second cycle of screening were placed in an isolated crossing block at Touchet, WA and bulk-harvested as breeder seed (syn-1) in 2006.

### **Areas of Probable Adaptation**

Gallant is adapted to the east central United States, and is intended for use in that area. It has been tested in Indiana, Kentucky, Pennsylvania, Tennessee, and Virginia.

### **Agronomic and Botanical Characteristics**

Classification: double cut (medium)      Productive Persistence: perennial  
Ploidy: diploid      Flower color: 3% red, 19% DP, 48% MP, 30% LP  
% Flowering Seeding Year: 64      % Leaf Marking at 50% Flowering: 84  
Stem Hairiness: 95%, with 88% perpendicular or pointing down, 7% pointing up  
Description of Variants: 5% of plants without stem hairs, 16% without leaf marks.

**Additional description:** Gallant is highly resistant to northern and southern anthracnose, and resistant to powdery mildew.

### **Procedures for Maintaining Seed Stock**

Seed increase of Gallant is limited to two generations each of breeder (Syn-1 or Syn-2), foundation (Syn-2 or Syn-3), and certified (Syn-3 or Syn-4) classes. Breeder seed was produced in 2006 (Syn-1) and 2010 (Syn-2) sufficient for the life of the variety, and will be maintained by FFR Cooperative. Length of stand allowed is 2 years and 3 years each for the foundation and certified classes, respectively. Production of foundation seed is limited to the northwest United States.

### **Certified Seed Availability and Publication of Certified Seed Production**

Certified seed of Gallant will be available in 2013. Certified seed production acreage may not be published by AOSCA and member agencies.

### **PVP Information**

Application will not be made for Plant Variety Protection. Information in this application may be forwarded to the PVP office.

**Accepted:** January 2012

**Amendment submitted:** November 12, 2012

Date recommended by the NVRB: Feb 21, 2013

