

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



ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

NATIONAL ALFALFA AND MISCELLANEOUS LEGUMES
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VARIETY REVIEW BOARD

ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES
(JANUARY 2011)

The Association of Official Seed Certifying Agencies (AOSCA) National Alfalfa and Miscellaneous Legumes Variety Review Board reviewed the following varieties on January 11, 2011, in Las Vegas, NV. 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,

Brad Erker, Chair
National Alfalfa and Miscellaneous Legumes Variety Review Board

2011 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.

243 (CW 044031)

Breeding History:

243 is a synthetic variety with 213 parent plants selected sequentially for resistance to Phytophthora root rot, Aphanomyces root rot, and anthracnose. Parent plants were selected from crosses between selections of various populations from three-year old Pennsylvania yield trials, three year old Wisconsin yield trials, and from three-year old Wisconsin nurseries. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, fast recovery, standability, high NDFD and low ADL (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, high forage dry matter yield, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of 243 traces to the following germplasm sources: GH 717 (38%), Stealth SF (38%), CW 04-105a (13%) and CW 04-105b (11%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

243 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. areas of the U.S. 243 has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

243 is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. 243 is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple. 243 has low multifoliolate leaf expression rating similar to Low MF check variety.

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

Procedures for Maintaining Seed Stock:

Seed increase of 243 is on a limited generation basis with one generation of breeder and two generations of the 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 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.

Date Certified Seed First Offered for Sale:

Certified seed of 243 will be available in 2008

PVP Information:

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

Variety Name 243

Experimental Designation(s) CW 044031

Date NA&MLVRB first accepted this variety January 13, 2009

Date(s) previous amendments were accepted January 12, 2010

Date amendment submitted November 30, 2010



A4535 (TS 4010)

Breeding History:

A4535 is a synthetic variety with 200 parent clones. Parent clones trace to populations selected for resistance to Phytophthora Root Rot, Bacterial wilt, Fusarium wilt, Aphanomyces (Race 1), Stem Nematode, Grazing Tolerance, and Wheel Traffic/Compaction Tolerance. Recurrent phenotypic selection was used in the development of the parent populations. Final selections were from field locations in Idaho, Minnesota and Illinois, for overall root and crown health. Parentage traces to grazing, and Traffic/Compaction tolerant breeding populations derived from Amerigraze 401+Z and miscellaneous breeding populations. Breeder seed (Syn.1) was produced under greenhouse and field isolation using transplanted parental clones and/or replicated cuttings. Breeder seed was produced in the spring of 2006 (greenhouse) and summer 2006 (field). Seed was harvested in total on all parents and bulked to form breeder seed.

Area of probable adaptation:

A4535 is adapted to the North Central, Southeast, and Winterhardy Intermountain areas of the US. It is intended for use in the North Central, Winterhardy Intermountain, and Great Plains areas of the US. A4535 has been tested in Idaho, Georgia, Wisconsin, and Michigan.

Agronomic and Botanical Characteristics:

A4535 is a moderately dormant variety with fall dormancy similar to the FD 4 check variety. Flower color observed in the Syn.2 generation is approximately 70% purple and 30% variegated, with a trace of white, cream, and yellow.

A4535 has high resistance to anthracnose (race 1), Bacterial wilt, Verticillium wilt, Phytophthora root rot, and Aphanomyces root rot (race 1), with resistance to Fusarium wilt and pea aphid, and moderate resistance to stem nematode. The reaction to spotted alfalfa aphid, blue alfalfa aphid, and root knot nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of A4535 is on a limited generation basis with one generations of breeder, and two generations of the 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 (Syn.1) was produced under field isolation near Caldwell, Idaho 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. Production of foundation seed is limited to the Pacific Northwest.

Date Certified Seed First Offered for Sale:

Certified seed of A4535 will be available in 2011.

PVP Information:

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

Variety Name: A4535 Date submitted December 1, 2010

Experimental designations: TS 4010



Charger (CW 35006)

Breeding History:

Charger is a synthetic variety with 38 parent plants. Parent plants were selected from various populations from three-year old Wisconsin nurseries. Nursery source plants were derived from various populations that were developed by phenotypic recurrent selection for fast growth rate, standability, multifoliolate leaf expression, winter hardiness, high forage dry matter yield, high relative feed value (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, and high rumen undegradable protein using (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 leafspot. Parentage of Charger traces to the following germplasm sources: 75046 (26%), 75047 (10%), CW 500 (59%), 95027 (5%). Breeder seed was produced under cage isolation near Woodland, California in 2003. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

Charger 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.. Charger has been tested in Wisconsin, Iowa, and Minnesota.

Agronomic and Botanical Characteristics:

Charger is a moderately dormant variety with fall dormancy similar to FD class 5 check varieties. Charger is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 98% purple, and 2% white, with a trace of cream.

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

Procedures for Maintaining Seed Stock:

Seed increase of Charger 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 2003. 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.

Date Certified Seed First Offered for Sale:

Certified seed of Charger will be available in 2007.

PVP Information:

This information can be forwarded to the PVP office.

Variety Name Charger

Experimental Designation(s) CW 35006

Date NA&MLVRB first accepted this variety January 16, 2007

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



eXclaim (CW 043003)

Breeding History:

eXclaim is a synthetic variety with 18 parent plants. Parent plants were selected from crosses between selections of various populations from three-year old Minnesota yield trials, three year old Wisconsin yield trials, and from three-year old Wisconsin nurseries. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, high NDFD and low ADL (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, high forage dry matter yield, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1 and/or race 2), anthracnose (race 1), and Leptosphaerulina leafspot. Parentage of eXclaim traces to the following germplasm sources: Harmony (6%), 30-30Q (17%), 9429 (6%), CW 83010 (17%), CW 03014 (11%), and miscellaneous Cal West Seeds germplasm (43%). Breeder seed was produced under cage isolation near Woodland, California during 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

eXclaim 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. areas of the U.S. eXclaim has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

eXclaim is a moderately dormant variety with fall dormancy similar to FD class 3 check varieties. eXclaim is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple. eXclaim has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

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

Procedures for Maintaining Seed Stock:

Seed increase of eXclaim 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.

Date Certified Seed First Offered for Sale:

Certified seed of eXclaim will be available in 2010.

PVP Information:

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

Variety Name eXclaim

Experimental Designation(s) CW 043003

Date NA&MLVRB first accepted this variety January 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



ForageGold (CW 044026)

Breeding History:

ForageGold is a synthetic variety with 91 parent plants. Parent plants were selected from crosses between selections of various populations from three-year old Iowa yield trials, three-year old Pennsylvania yield trials, three year old Wisconsin yield trials, and from three-year old Wisconsin nurseries. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, high NDFD and low ADL (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, high forage dry matter yield, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1 and/or race 2), anthracnose (race 1), and Leptosphaerulina leafspot. Parentage of ForageGold traces to the following germplasm sources: Alliant (1%), Cornerstone (6%), Foremost II (6%), GH 700 (3%), Olympian (5%), Power 4.2 (5%), Radiant AM (5%), Trialfalon (1%), Tribute (6%), WinterGold (9%), and CW 04-060 (53%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

ForageGold 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. areas of the U.S. ForageGold has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

ForageGold is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. ForageGold is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple with a trace of variegated. ForageGold has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

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

Procedures for Maintaining Seed Stock:

Seed increase of ForageGold 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.

Date Certified Seed First Offered for Sale:

Certified seed of ForageGold will be available in 2010.

PVP Information:

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

Variety Name Forage Gold

Experimental Designation(s) CW 044026

Date NA&MLVRB first accepted this variety January 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



Foremost II (CW 04027)

Breeding History:

Foremost II is a synthetic variety with 290 parent plants selected for dense crowns, high leaf to stem ratio, vigorous roots, and no stem, crown, or root rot. Parent plants were selected from three-year old Minnesota 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 Foremost II traces to the following germplasm sources: Foremost (52%), GH 700 (11%), Radiant (7%), A4230 (7%), Perfect (2%), and miscellaneous Cal/West Seeds breeding populations (21%). Breeder seed was produced under cage isolation near Woodland, California in 2000. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

Foremost II 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. Foremost II has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

Foremost II is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. Foremost II is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 98% purple, 1% cream, and 1% variegated. Foremost II has high multifoliolate leaf expression rating similar to High MF check variety.

Foremost 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 root knot nematode, and stem nematode; and with moderate resistance to pea aphid and spotted alfalfa aphid. Reaction to the blue alfalfa aphid and cow pea aphid has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of Foremost 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 2000. 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.

Date Certified Seed First Offered for Sale:

Certified seed of Foremost II will be available in 2011.

PVP Information:

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

Variety Name: Foremost II Date submitted November 30, 2010

Experimental designations: CW 04027



PGI 215 (CW 02001)

Breeding History:

PGI 215 is a synthetic variety with 114 parent plants that were selected sequentially for high winter hardiness, high forage yield, high relative feed value, and multifoliolate leaf expression. Parent plants were selected from selections from five-year old Pennsylvania, three-year old Minnesota, three-year old Wisconsin yield trials, and from three-year old Wisconsin nursery selections from various populations. Yield trial source varieties and nursery source plants were derived from various populations that were developed by phenotypic recurrent selection for high relative feed value (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 215 traces to the following germplasm sources: TMF 421, Abound, Gold Plus, Sprint, and miscellaneous Cal/West Seeds breeding populations. Breeder seed (Syn.1) was produced under cage isolation near Woodland, California in 2000.

Area of Probable Adaptation:

PGI 215 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, and Winterhardy Intermountain areas of the U.S. PGI 215 has been tested in Wisconsin and Iowa.

Agronomic and Botanical Characteristics:

PGI 215 is a dormant variety with fall dormancy similar to FD class 2 check varieties. PGI 215 is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 93% purple, 1% variegated, 2% cream, and 4% yellow, with a trace of white.

PGI 215 has high resistance to anthracnose (race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, and Phytophthora root rot, resistance to Aphanomyces root rot (race 1) and spotted alfalfa aphid, and moderate resistance to pea aphid. Reaction to the blue alfalfa aphid, stem nematode, and root knot nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of PGI 215 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 2000. 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.

Date Certified Seed First Offered for Sale:

Certified seed of PGI 215 will be available in 2006.

PVP Information:

This information can be forwarded to the PVP office.

Variety Name PGI 215

Experimental Designation(s) CW 02001

Date NA&MLVRB first accepted this variety January 12, 2006

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



PGI 557 (CW 055023)

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.

Area 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. areas of the U.S. PGI 557 has been tested in Iowa, Minnesota, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

PGI 557 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, 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.

Date Certified Seed First Offered for Sale:

Certified seed of PGI 557 will be available in 2010.

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 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



Pillar (CW 34029)

Breeding History:

Pillar is a synthetic variety with 225 parent plants that were selected sequentially for multifoliolate leaf expression and for resistance to Phytophthora root rot, Aphanomyces root rot, and anthracnose. Parent plants were selected from crosses between selections of various populations from a four-year old Wisconsin yield trial. Yield trial source varieties were derived from various populations that were developed by phenotypic recurrent selection for fast growth rate, winter hardiness, high forage yield, high relative feed value (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 leafspot. Parentage of Pillar traces to the following germplasm sources: CW 83021 (32%), CW 84028 (37%), and GH 717 (31%). Breeder seed was produced under cage isolation near Woodland, California in 2003. Seed was bulk harvested from all parent plants

Area of Probable Adaptation:

Pillar 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. Pillar has been tested in Wisconsin, Minnesota, Iowa, Pennsylvania, and Kansas

Agronomic and Botanical Characteristics:

Pillar is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. Pillar is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple.

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

Procedures for Maintaining Seed Stock:

Seed increase of Pillar 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 2003. 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.

Date Certified Seed First Offered for Sale:

Certified seed of Pillar will be available in 2007.

PVP Information:

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

Variety Name Pillar

Experimental Designation(s) CW 34029

Date NA&MLVRB first accepted this variety January 16, 2007

Date(s) previous amendments were accepted January 12, 2010

Date amendment submitted November 30, 2010



Summit (CW 055026)

Breeding History:

Summit is a synthetic variety with 108 parent plants. Parent plants were selected from crosses between selections of various populations from three-year old Iowa yield trials, three-year old Minnesota yield trials, three year old Wisconsin yield trials, and from three-year old Wisconsin nurseries. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, high NDFD and low ADL (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, high forage dry matter yield, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), anthracnose (race 1), and Leptosphaerulina leafspot. Parentage of Summit traces to the following germplasm sources: Radiant AM (2%), Foremost II (1%), Cornerstone (1%), Shepherd (9%), 512 (5%), A 4230 (1%), GH 700 (4%), Ascend (6%), Tribute (1%), Labrador (3%), SummerGold (3%), CW 05-081 (14%), CW 05-082 (12%), CW 05-083 (19%), and CW 05-084 (19%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

Summit 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. areas of the U.S. Summit has been tested in Iowa, Minnesota, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

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

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

Procedures for Maintaining Seed Stock:

Seed increase of Summit 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.

Date Certified Seed First Offered for Sale:

Certified seed of Summit will be available in 2010.

PVP Information:

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

Variety Name Summit

Experimental Designation(s) CW 055026

Date NA&MLVRB first accepted this variety 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



SunDance II (CW 045035)

Breeding History:

SunDance II is a synthetic variety with 156 parent plants. Parent plants were selected from crosses between selections of various populations from three-year old Iowa yield trials, three-year old Pennsylvania yield trials, three year old Wisconsin yield trials, and from three-year old Wisconsin nurseries. Yield trial and nursery source plants were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, fast recovery, standability, high NDFD and low ADL (using Near Infrared Reflectance Spectroscopy), high milk per acre using Milk2000, high forage dry matter yield, and for resistance to one or more of the following pests: bacterial wilt, Fusarium Wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (race 1), anthracnose (race 1), and Leptosphaerulina leaf spot. Parentage of SunDance II traces to the following germplasm sources: Alicia (3%), Aubigny (2%), Daisy (2%), Europe (1%), Marshal (1%), Mercedes (2%), RADAR (5%), CW 500 (5%), Olympian (2%), Shepherd (6%), 512 (3%), Ascend (6%), Tribute (3%), CW 04-118 (14%), CW 04-119 (6%), CW 04-120 (16%), CW 04-121 (6%), and CW 04-122 (17%). Breeder seed was produced under cage isolation near Woodland, California in 2004. S. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

SunDance II 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. SunDance II has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin.

Agronomic & Botanical Characteristics:

SunDance II is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. SunDance II is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 100% purple. SunDance II has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

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

Procedures for Maintaining Seed Stock:

Seed increase of SunDance 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 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.

Date Certified Seed First Offered for Sale:

Certified seed of SunDance II will be available in 2010.

PVP Information:

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

Variety Name SunDance II

Experimental Designation(s) CW 045035

Date NA&MLVRB first accepted this variety January 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



TS 4002 (TS 4002)

Breeding History:

TS 4002 is a synthetic variety with 250 parent clones. Parent clones trace to populations selected for resistance to Phytophthora Root Rot, Bacterial wilt, Fusarium wilt, Aphanomyces (Race 1), Stem Nematode, Grazing Tolerance, and Wheel Traffic/Compaction Tolerance. Recurrent phenotypic selection was used in the development of the parent populations. Final selections were from field locations in Idaho and Wyoming, for overall root and crown health. Parentage traces to grazing, and Traffic/Compaction tolerant breeding populations derived from Ladak DL, Venture, Genesis, Garst 645., Aggressor, Nordic, Cutter, Dominator, and miscellaneous breeding populations. Breeder seed (Syn.1) was produced under greenhouse and field isolation using transplanted parental clones and/or replicated cuttings. Breeder seed was produced in the spring of 2006 (greenhouse) and summer 2006 (field). Seed was harvested in total on all parents and bulked to form breeder seed.

Area of Probable Adaptation:

TS 4002 is adapted to the North Central and Winterhardy Intermountain areas of the US. It is intended for use in the North Central, Winterhardy Intermountain, and Great Plains areas of the US. TS 4002 has been tested in Idaho, Wyoming, North Dakota, and Nebraska.

Agronomic and Botanical Characteristics

TS 4002 is a moderately dormant variety with fall dormancy similar to the FD 4 check variety. Flower color observed in the Syn.2 generation is approximately 68% purple and 32% variegated, with a trace of white, cream, and yellow.

TS 4002 has high resistance to anthracnose (race 1), Bacterial wilt, Verticillium wilt, Phytophthora root rot, and Aphanomyces root rot (race 1), with resistance to Fusarium wilt and pea aphid, and moderate resistance to stem nematode. The reaction to spotted alfalfa aphid, blue alfalfa aphid, and root knot nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of TS 4002 is on a limited generation basis with one generations of breeder, and two generations of the 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 (Syn.1) was produced under field isolation near Caldwell, Idaho 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. Production of foundation seed is limited to the Pacific Northwest.

Date Certified Seed First Offered for Sale:

Certified seed of TS 4002 will be available in 2011.

PVP Information:

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

Variety Name: TS 4002 Date submitted December 1, 2010

Experimental designations: TS 4002



TS 4007 (TS 4007)

Breeding History:

TS 4007 is a synthetic variety with 225 parent clones. Parent clones trace to populations selected for resistance to Phytophthora Root Rot, Bacterial wilt, Fusarium wilt, Aphanomyces (Race 1), Stem Nematode, Grazing Tolerance, and Wheel Traffic/Compaction Tolerance. Recurrent phenotypic selection was used in the development of the parent populations. Final selections were from field locations in Idaho and Illinois, for overall root and crown health. Parentage traces to grazing, and Traffic/Compaction tolerant breeding populations derived from Venture, Genesis, Garst 645, Aggressor, Nordic, Cutter, Stine 9227, Dominator, Trident II, and miscellaneous breeding populations. Breeder seed (Syn.1) was produced under greenhouse and field isolation using transplanted parental clones and/or replicated cuttings. Breeder seed was produced in the spring of 2006 (greenhouse) and summer 2006 (field). Seed was harvested in total on all parents and bulked to form breeder seed.

Area of Probable Adaptation:

TS 4007 is adapted to the North Central, East Central, and Winterhardy Intermountain areas of the US. It is intended for use in the North Central, East Central, Winterhardy Intermountain, and Great Plains areas of the US. TS 4007 has been tested in Idaho, Minnesota, South Dakota, and Illinois.

Agronomic and Botanical Characteristics:

TS 4007 is a moderately dormant variety with fall dormancy similar to the FD 4 check variety. Flower color observed in the Syn.2 generation is approximately 72% purple and 28% variegated, with a trace of white, cream, and yellow.

TS 4007 has high resistance to anthracnose (race 1), Bacterial wilt, Verticillium wilt, Phytophthora root rot, and Aphanomyces root rot (race 1), with resistance to Fusarium wilt and pea aphid, and moderate resistance to stem nematode. The reaction to spotted alfalfa aphid, blue alfalfa aphid, and root knot nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of TS 4007 is on a limited generation basis with one generations of breeder, and two generations of the 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 (Syn.1) was produced under field isolation near Caldwell, Idaho 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. Production of foundation seed is limited to the Pacific Northwest.

Date Certified Seed First Offered for Sale:

Certified seed of TS 4007 will be available in 2011.

PVP Information:

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

Variety Name: TS 4007 Date submitted December 1, 2010

Experimental designations: TS 4007



(CW 044018)

Breeding History:

CW 044018 is a synthetic variety with 52 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 CW 044018 traces to the following germplasm sources: Abound (2%), Alliant (2%), Cornerstone (2%), Double Eagle (2%), Foremost II (2%), FQ 315 (2%), Trialfalon (2%), WinterGold (8%), and CW 04-048 (78%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

CW 044018 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. CW 044018 has been tested in Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 044018 is a moderately dormant variety with fall dormancy similar to FD class 4 check varieties. CW 044018 is very Winterhardy, similar to WS class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 99% purple and 1% variegated. CW 044018 has moderate multifoliolate leaf expression rating similar to the moderate MF check variety.

CW 044018 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 moderate resistance to blue alfalfa aphid and cow pea aphid; Reaction to the spotted alfalfa aphid, stem nematode, and root knot nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 044018 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 044018 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 044018



(CW 045025)

Breeding History:

CW 045025 is a synthetic variety with 53 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 two and three year old selection nurseries, 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 CW 045025 traces to the following germplasm sources: Ascend (3%), WinterGold (3%), Tribute (2%), CW 04-071 (44%), and CW 04-072 (48%). Breeder seed was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

CW 045025 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. CW 045025 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 045025 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 99% purple and 1% variegated. CW 045025 has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

CW 045025 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 blue alfalfa aphid, pea aphid, and stem nematode; and with moderate resistance to cow pea aphid. Reaction to the spotted alfalfa aphid and root knot nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 045025 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 045025 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 045025



(CW 046081)

Breeding History:

CW 046081 is a synthetic variety with 180 parent plants which were selected for cowpea aphid resistance. Parent plants were selected from a population selected for leaf disease resistance, aphid resistance, drought tolerance, frost tolerance, persistence and agronomic characteristics from space planted nurseries and yield trials in Argentina. The parentage of CW 046081 traces to CW 620, DK 166, 5683, 5681, Aurora, Cordobesa, and miscellaneous Cal/West Seeds breeding populations. Breeder seed (Syn.1) was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 046081 is adapted to the Southwestern area of the U.S. and Argentina. It is intended for use in the Southwestern U.S. and Argentina. CW 046081 has been tested in California and Argentina.

Agronomic and Botanical Characteristics:

CW 046081 is a moderately dormant variety with fall dormancy similar to the FD 6 check variety. Flower color observed in the Syn.2 generation is greater than 99% purple and 1% white with a trace of variegated, cream, and yellow.

CW 046081 has high resistance to anthracnose (race 1), Fusarium wilt, Phytophthora root rot, pea aphid, spotted alfalfa aphid, blue alfalfa aphid, and northern root knot nematode, with resistance to Verticillium wilt and cowpea aphid, and moderate resistance to Bacterial wilt and stem nematode. The reaction to Aphanomyces root rot (race 1) has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 046081 is on a limited generation basis with two generations 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 (Syn.1) 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 046081 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 046081



(CW 052036)

Breeding History:

CW 052036 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 CW 052036 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.

Area of Probable Adaptation:

CW 052036 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. CW 052036 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 052036 is a dormant variety with fall dormancy similar to FD class 2 check varieties. Flower color observed in the Syn.2 generation is approximately 99% purple and 1% cream. CW 052036 has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

CW 052036 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt, and 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 CW 052036 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 052036 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 052036



(CW 053014)

Breeding History:

CW 053014 is a synthetic variety with 40 parent plants selected for dense crowns, high leaf to stem ratio, vigorous roots, and no stem, crown, or root rot. Parent plants were selected from three-year 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 053014 traces to the following germplasm sources: Setter (8%), Dynamic (8%), 30-30 Q (8%), Upper Edge (10%), Keystone (10%), Legend Extra (10%), and CW 05-022 (46 %). Breeder seed was produced under cage isolation near Woodland, California in 2005. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

CW 053014 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. CW 053014 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 053014 is a dormant variety with fall dormancy similar to FD class 3 check varieties. Flower color observed in the Syn.2 generation is approximately 96% purple, 3% variegated, and 1% yellow; with a trace of cream. CW 053014 has moderate multifoliolate leaf expression rating similar to Moderate MF check variety.

CW 053014 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 blue alfalfa aphid and stem nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 053014 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 053014 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 053014



(CW 064004)

Breeding History:

CW 064004 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 CW 064004 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.

Area of Probable Adaptation:

CW 064004 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. CW 064004 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 064004 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 95% purple, 4% variegated, and 1% cream; with a trace of white. CW 064004 has high multifoliolate leaf expression rating similar to High MF check variety.

CW 064004 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 root knot nematode; with moderate resistance to spotted alfalfa aphid. Reaction to stem nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 064004 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 064004 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 064004



(CW 064096)

Breeding History:

CW 064096 is a synthetic variety with 178 parent plants which were selected for persistence and vigor after 6 years of close continuous grazing with sheep in New South Wales and Victoria Australia. Parent plants were selected from various populations that were developed by one or two prior cycles of selection for persistence and vigor following two years of close continuous grazing with beef cattle and/or sheep at Woodland, California. The parentage of CW 064096 traces to PAN 4560, Force 5, Stamina 5, Force 7, Venus, and miscellaneous Cal/West Seeds breeding populations. Breeder seed was produced under field isolation near Bendigo, Victoria, Australia in 2006. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 064096 is adapted to the North Central, East Central, Moderately Winterhardy Intermountain, and Winterhardy Intermountain areas of the U.S. and Australia. It is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain, and Winterhardy Intermountain areas of the U.S. and Australia. CW 064096 has been tested in Wisconsin, Iowa, Minnesota, Pennsylvania, California, and Australia.

Agronomic and Botanical Characteristics:

CW 064096 is a moderately dormant variety with fall dormancy similar to the FD 5 check variety. Flower color observed in the Syn.2 generation is approximately 97% purple, 2% variegated, and 1% white with a trace of cream, and yellow.

CW 064096 has high resistance to anthracnose (race 1), Fusarium wilt, and pea aphid, with resistance to Bacterial wilt, Verticillium wilt, Aphanomyces root rot (race 1), and cowpea aphid, and low resistance to Phytophthora root rot. The reaction to spotted alfalfa aphid, blue alfalfa aphid, stem nematode, and northern root knot nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 064096 is on a limited generation basis with two generations 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 (Syn.1) was produced under field isolation near Bendigo, Victoria, Australia 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 064096 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 064096



(CW 065030)

Breeding History:

CW 065030 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 CW 065030 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.

Area of Probable Adaptation:

CW 065030 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. CW 065030 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 065030 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. CW 065030 has low multifoliolate leaf expression rating similar to Low MF check variety.

CW 065030 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 CW 065030 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 065030 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 065030



(CW 066095)

Breeding History:

CW 066095 is a synthetic variety with 342 parent plants which were selected for persistence and vigor after 6 years of close continuous grazing with sheep in New South Wales and Victoria Australia. Parent plants were selected from various populations that were developed by one or two prior cycles of selection for persistence and vigor following two years of close continuous grazing with beef cattle and/or sheep at Woodland, California. The parentage of CW 066095 traces to Stamina GT6, Force 7, Stamina 5, Force 5, KKS 9595, and miscellaneous Cal/West Seeds breeding populations. Breeder seed was produced under field isolation near Bendigo, Victoria, Australia in 2006. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 066095 is adapted to the Moderately Winterhardy Intermountain area of the U.S. and Australia. It is intended for use in the Moderately Winterhardy Intermountain area of the U.S. and Australia. CW 066095 has been tested in California, and Australia.

Agronomic and Botanical Characteristics:

CW 066095 is a moderately dormant variety with fall dormancy similar to the FD 6 check variety. Flower color observed in the Syn.2 generation is approximately 99% purple and 1% variegated with a trace of white, cream, and yellow.

CW 066095 has high resistance to anthracnose (race 1), Fusarium wilt, pea aphid, blue alfalfa aphid, and northern root knot nematode with resistance to Phytophthora root rot, spotted alfalfa aphid, and cowpea aphid, moderate resistance to Bacterial wilt and Aphanomyces root rot (race 1), and low resistance to Verticillium wilt. The reaction to stem nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 066095 is on a limited generation basis with two generations 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 (Syn.1) was produced under field isolation near Bendigo, Victoria, Australia 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 066095 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 066095



(CW 068094)

Breeding History:

CW 068094 is a synthetic variety with 74 parent plants which were selected for persistence and vigor after 6 years of close continuous grazing with sheep in New South Wales and Victoria Australia. Parent plants were selected from various populations that were developed by one or two prior cycles of selection for persistence and vigor following two years of close continuous grazing with beef cattle and/or sheep at Woodland, California. The parentage of CW 068094 traces to Stamina GT6, KKS 9595, Force 7, Stamina 5, Genesis, Eureka, Trifecta, and miscellaneous Cal/West Seeds breeding populations. Breeder seed was produced under field isolation near Bendigo, Victoria, Australia in 2006. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 068094 is adapted to the Southwest area of the U.S. and Australia. It is intended for use in the Southwest area of the U.S. and Australia. CW 068094 has been tested in California, and Australia.

Agronomic and Botanical Characteristics:

CW 068094 is a nondormant variety with fall dormancy similar to the FD 8 check variety. Flower color observed in the Syn.2 generation is approximately 98% purple and 2% variegated with a trace of white, cream, and yellow.

CW 068094 has high resistance to anthracnose (race 1), Fusarium wilt, Phytophthora root rot, spotted alfalfa aphid, blue alfalfa aphid, and northern root knot nematode with resistance to Bacterial wilt, moderate resistance to Verticillium wilt and low resistance to Aphanomyces root rot (race 1). The reaction to pea aphid and stem nematode has not been adequately tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 068094 is on a limited generation basis with two generations 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 (Syn.1) was produced under field isolation near Bendigo, Victoria, Australia 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 068094 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 068094



(CW 075028)

Breeding History:

CW 075032 is a synthetic variety with 220 parent plants selected for fast recovery, high standability, 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 were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, fast recovery, standability, high NDFD and low ADL (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 075028 traces to the following germplasm sources: CW 500 (2%), PGI 437 (6%), and CW 07-201 (92%). Breeder seed was produced under cage isolation near Woodland, California in 2007. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

CW 075028 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. CW 075028 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 075028 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 95% purple and 5% variegated, with a trace of cream and yellow. CW 075028 has low multifoliolate leaf expression rating similar to Low MF check variety. CW 075028 has resistance to lodging with standability rating similar to the class 9 check variety.

CW 075028 has high resistance to anthracnose (race 1), Aphanomyces root rot (race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, Verticillium wilt; and resistance to blue alfalfa aphid, pea aphid, and stem nematode; with low resistance to cow pea aphid. Reaction to the spotted alfalfa aphid and root knot nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 075028 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 075028 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 075028



(CW 075032)

Breeding History:

CW 075032 is a synthetic variety with 62 parent plants selected for fast recovery, high standability, 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 were selected from various populations that were developed by phenotypic recurrent selection for winter hardiness, leaf disease resistance, high leaf to stem ratio, fast recovery, standability, high NDFD and low ADL (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 075028 traces to the following germplasm sources: CW 500 (2%), PGI 437 (10%), CW 07-205 (33%), CW 07-206 (27%), and CW 07-207 (28%). Breeder seed was produced under cage isolation near Woodland, California in 2007. Seed was bulk harvested from all parent plants as Synthetic generation 2.

Area of Probable Adaptation:

CW 075032 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. CW 075032 has been tested in Idaho, Iowa, Minnesota, Ohio, Pennsylvania, and Wisconsin

Agronomic and Botanical Characteristics:

CW 075032 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 98% purple and 2% variegated. CW 075032 has low multifoliolate leaf expression rating similar to Low MF check variety. CW 075032 has resistance to lodging with standability rating similar to the class 9 check variety.

CW 075032 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 blue alfalfa aphid, pea aphid, and stem nematode; and with low resistance to cow pea aphid. Reaction to the spotted alfalfa aphid and root knot nematode has not been tested.

Procedures for Maintaining Seed Stock:

Seed increase of CW 075032 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.

Date Certified Seed First Offered for Sale:

Certified seed of CW 075032 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted November 30, 2010

Experimental designations: CW 075032



N-R-GEE (NY 0231)

Breeding History:

N-R-GEE is a 27 clone synthetic variety originating from germplasm sources labeled at Cornell as B x A, crossed onto Oneida VR. This population went through several cycles of recurrent phenotypic selection for multiple disease resistances (Anthracnose (Race 1), Bacterial Wilt, Fusarium Wilt, Verticillium Wilt, and Phytophthora Root Rot), followed by three cycles of phenotypic selection in the field for plant vigor, freedom of diseases, resistance to lodging, and increased forage quality. Equal weight of seed was harvested on all parents and bulked to form Syn. 1 seed.

Area of Probable Adaptation:

N-R-GEE is adapted to the North Central and East Central regions. This variety has been tested in New York and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

N-R-GEE is moderately dormant similar to the FD 4 check. Flower color (Syn. 3) is 66% purple, and 34% variegated with a trace of yellow, cream and white. Pod shape (Syn. 3) is 82% tightly coiled and 18% loosely coiled. N-R-GEE has high forage quality (ADF, NDF, and RFV) similar to the high quality check.

N-R-GEE has high resistance to bacterial wilt, Verticillium wilt, and Fusarium wilt; with resistance to anthracnose (Race 1), and Phytophthora root rot. N-R-GEE is susceptible to Aphanomyces root rot (Race 1).

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. 2), foundation (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 Caldwell, ID in 2002. Enough seed was produced to last the life of the variety. Seed is maintained under environmentally controlled conditions at Cornell University in Ithaca, NY. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

Date Certified Seed First Offered for Sale:

Certified seed will first be marketed in 2011.

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: N-R-GEE Date submitted December 1, 2010

Experimental designations: NY 0231



2010 (DS722)

Breeding History:

2010 is an 80 clone synthetic. The parent clones were selected out of disease nurseries for *Phytophthora* root rot, *Aphanomyces* root rot (Race 1 and Race 2) and rhizomatous crown tendencies. All of parent plants trace back to Dairyland experimental germplasm. Parent plants were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2005 to produce Syn. 1 as Breeder Seed. Seed from parent plants were bulked to produce Breeder seed.

Area of Probable Adaptation:

2010 is adapted to the North Central Region of the United States and intended for use across the North Central and Winterhardy Intermountain regions of the United States. The state where it has been tested is Wisconsin.

Agronomic and Botanical Characteristics:

2010 is a dormant variety similar to the fall dormancy 2 check. 2010 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.

2010 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt; resistance to *Aphanomyces* root rot (Race1). 2010 has not been tested for resistance to northern root-knot nematode, stem nematode, spotted alfalfa aphid, pea aphid and blue alfalfa aphid.

Procedures for Maintaining Seed Stock:

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were crossed in isolation near Sloughhouse, CA in 2005. 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 Foundation seed for the projected life of the variety.

Date Certified Seed First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety Name 2010

Experimental Designation(s) DS722

Date NA&MLVRB first accepted this variety Jan 13, 2009

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



3010 (DS721)

Breeding History:

3010 is a 37 clone synthetic. Parent plants were selected for deep set crowns, early fall dormancy and resistance to the disease complex of bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot and *Aphanomyces* root rot (Race 1 and 2). The source populations for **3010** are from elite Dairyland experimental germplasm (86%), Thor (3%), Bounty (8%), and TMF421 (3%). Selected plants were inter-pollinated near Sloughhouse, CA in 2002 and bulked to produce Syn. 1 as Breeder seed.

Area of Probable Adaptation:

3010 is adapted to the North Central Region of the United States and intended for use cross the North Central and Winterhardy Intermountain regions of the United States. The state where it has been tested is Wisconsin.

Agronomic and Botanical Characteristics:

3010 is a dormant variety similar to the fall dormancy 2 check. 3010 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.

3010 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode; resistance to stem nematode, southern root-knot nematode and moderate resistance to *Aphanomyces* root rot (Race2). 3010 has not been tested for resistance to spotted alfalfa aphid, pea aphid and blue alfalfa aphid.

Procedures for Maintaining Seed Stock:

Breeder seed (Syn. 1) was produced by bulking seed of parent plants which were crossed in isolation near Sloughhouse, CA in 2002. 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 Foundation seed for the projected life of the variety.

Date Certified Seed First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety Name 3010

Experimental Designation(s) DS721

Date NA&MLVRB first accepted this variety Jan 13, 2009

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



4030 (DS812-T)

Breeding History:

4030 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 2006 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed.

Area of Probable Adaptation:

4030 is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central and East Central Regions of the United States. The states where it has been tested are Wisconsin, Minnesota, Iowa and New York.

Agronomic and Botanical Characteristics:

4030 is a moderately dormant variety similar to the fall dormancy 4 check. 4030 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.

4030 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode; resistance to stem nematode, *Aphanomyces* root rot (Race2) and moderate resistance to southern root-knot nematode. 4030 has not been tested for resistance to spotted alfalfa aphid, pea 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. Seed from parental clones were 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 2010.

PVP Information:

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

Variety Name 4030

Experimental Designation(s) DS812-T

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



6010 (DS878)

Breeding History:

6010 is a 12 clone synthetic. This population was 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). Parent plants trace back to Dairyland germplasm (66%), Victoria (17%) and Costera (17%). 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 to produce Breeder seed.

Area of Probable Adaptation:

6010 is adapted to the Southwest Region of the United States and intended for use across the Southeast, Southwest and Great Plains Regions of the United States. The state and country where it has been tested are California and Argentina.

Agronomic and Botanical Characteristics

6010 is a moderately dormant variety similar to the fall dormancy 6 check. 6010 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.

6010 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, northern root-knot nematode; resistance to *Aphanomyces* root rot (Race1), stem nematode and southern root-knot nematode. 6010 has not been tested for resistance to spotted alfalfa aphid, pea 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. Seed from parental clones were bulked. 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety name: 6010 Date submitted November 23, 2010

Experimental designations: DS878



372HY (msSunstra-504)

Breeding History:

372HY is a three clone 75-95% hybrid alfalfa variety. Parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were tested for male sterility, maintaining and restoration ability. The parent plants 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 line traces to DS experimentals, maintainer trace to Thor and DS experimentals and restorer line trace to selections from Extend, 6410 and WL342. Female seed was generated by crossing a cytoplasmic male sterile female line by a maintainer line in field isolation and inter-pollinated by honey, leaf cutting and bumble bees. The female plants were harvested to produce the female Breeder Seed near Sloughouse, California in 2003-04. Male Breeder seed (Syn. 1) was produced in 2003 near Sloughouse, CA.

Area of Probable Adaptation:

372HY 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 states where it has been tested are Wisconsin, Minnesota and Iowa.

Agronomic and Botanical Characteristics:

372HY is a moderately dormant variety similar to the fall dormancy 4 check. 372HY is very winter hardy similar to the winter survival 2 check. Flower color of the male line in the Syn. 2 generation and female (F1) is 90% purple, 9% variegated, less than 1% white with trace amounts of yellow and cream. The male of 372HY is 1% white seeded.

372HY has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, northern root-knot nematode, stem nematode; resistance to *Aphanomyces* root rot (Race1) and southern root-knot nematode. 372HY has not been tested for resistance to pea aphid, blue alfalfa aphid and spotted alfalfa aphid.

Procedures for Maintaining Seed Stock:

Female Breeder seed was produced by crossing the cytoplasmic male sterile line (A) by the maintainer line (B) in field isolation near Sloughouse, CA in 2004-05. Female seed was kept separate across production years. Male Breeder seed (Syn. 1) was produced in field isolation near Sloughouse in 2003. Male Foundation seed (Syn. 2) was produced from Breeder seed. Hybrid seed (F1) was produced from crossing female seed by either Breeder or Foundation 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 First Offered for Sale:

Certified Seed will be available spring of 2008.

PVP Information:

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

Variety Name 372HY

Experimental Designation(s) msSunstra-504

Date NA&MLVRB first accepted this variety Jan 15, 2008

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



4010BR (DS711-BR)

Breeding History:

4010BR is a 24 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, branch root traits, 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 2006 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed.

Area of Probable Adaptation:

4010BR is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central and East Central Regions of the United States. The state where it has been tested is Wisconsin, Michigan and New York.

Agronomic and Botanical Characteristics:

4010BR is a moderately dormant variety similar to the fall dormancy 4 check. 4010BR 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.

4010BR 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 *Aphanomyces* root rot (Race2) and southern root-knot nematode. 4010BR has not been tested for resistance to spotted alfalfa aphid, pea 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. Seed from parental clones were 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 2011.

PVP Information:

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

Variety Name 4010BR

Experimental Designation(s) DS711-BR

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



4020MF (BY723)

Breeding History:

4020MF 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, multifoliolate expression; 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 2006 to produce Syn. 1 as Breeder Seed. Seed from parent plants were equally bulked each year to produce Breeder seed.

Area of Probable Adaptation:

4020MF is adapted to the North Central Region of the United States and intended for use across the North Central and East Central Regions of the United States. The state where it has been tested is Wisconsin.

Agronomic and Botanical Characteristics:

4020MF is a moderately dormant variety similar to the fall dormancy 4 check. 4020MF 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.

4020MF 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 *Aphanomyces* root rot (Race2) and moderate resistance to southern root-knot nematode. 4020MF has not been tested for resistance to spotted alfalfa aphid, pea 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. Seed from parental clones were 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 2011.

PVP Information:

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

Variety Name 4020MF

Experimental Designation(s) BY723

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



4040HY (msSunstra-610, DS751)

Breeding History:

4040HY is a three clone 75-95% hybrid alfalfa variety consisting of a female, maintainer and restorer line. Parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were tested for male sterility, maintaining and restoration ability. The parent plants 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 line, maintainer line and restorer line trace to Dairyland experimental germplasms. Female seed (D-1006A) was generated by crossing a cytoplasmic male sterile female line by a maintainer line in field isolation and inter-pollinated by honey, leaf cutting and bumble bees. The female plants were harvested to produce the female Breeder Seed near Sloughhouse, California in 2004-9. Female seed was kept separate each year to produce Breeder seed. Male Breeder seed (Syn. 1) (DS764M) was produced in 2003 near Sloughhouse, CA.

Area of Probable Adaptation:

4040HY is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central, East Central, Great Plains and Winterhardy Intermountain Regions of the United States. The states where it has been tested are Wisconsin and Minnesota.

Agronomic and Botanical Characteristics:

4040HY is a moderately dormant variety similar to the fall dormancy 4 check. 4040HY is very winter hardy similar to the winter survival 2 check. Flower color of the male line in the Syn. 2 generation and female (F1) is 90% purple, 9% variegated, less than 1% white with trace amounts of yellow and cream. The male of 4040HY is 1% white seeded.

4040HY 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; moderate resistance to southern root-knot nematode. 4040HY has not been tested for resistance to spotted alfalfa aphid, pea aphid and blue alfalfa aphid.

Procedures for Maintaining Seed Stock:

Female Breeder seed was produced by crossing the cytoplasmic male sterile line (A) by the maintainer line (B) in field isolation near Sloughhouse, CA in 2005-09. Female seed was kept separate across production years. Male Breeder seed (Syn. 1) was produced in field isolation near Sloughhouse in 2003. Male Foundation seed (Syn. 2) was produced from Breeder seed. Hybrid seed (F1) was produced from crossing female seed by either Breeder or Foundation 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety Name 4040HY

Experimental Designation(s) msSunstra-610, DS751

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



6020HY (mdSunstra-808)

Breeding History:

6020HY is a three clone 75-95% hybrid alfalfa variety. Parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were tested for male sterility, maintaining and restoration ability. The parent plants 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 line, maintainer and restorer line trace to Dairyland experimental germplasms. Female seed (D-1007A) was generated by crossing a cytoplasmic male sterile female line by a maintainer line in field isolation and inter-pollinated by honey, leaf cutting and bumble bees. The female plants were harvested to produce the female Breeder Seed near Sloughhouse, California in 2005-9. Female seed was kept separate each year to produce Breeder seed. Male Breeder seed (Syn. 1) (DS670) was produced in 2003 near Sloughhouse, CA.

Area of Probable Adaptation:

6020HY is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central, East Central, Great Plains and Winterhardy Intermountain Regions of the United States. The state where it has been tested is Wisconsin.

Agronomic and Botanical Characteristics:

6020HY is a moderately dormant variety similar to the fall dormancy 6 check. 6020HY is very winter hardy similar to the winter survival 2 check. Flower color of the male line in the Syn. 2 generation and female (F1) is 90% purple, 9% variegated, less than 1% white with trace amounts of yellow and cream. The male of 6020HY is 1% white seeded.

6020HY has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, northern root-knot nematode; resistance to anthracnose (Race 1), *Verticillium* wilt, stem nematode; moderate resistance to southern root-knot nematode. 6020HY has not been tested for resistance to spotted alfalfa aphid, pea aphid, blue alfalfa aphid and *Aphanomyces* root rot (Race1).

Procedures for Maintaining Seed Stock:

Female Breeder seed was produced by crossing the cytoplasmic male sterile line (A) by the maintainer line (B) in field isolation near Sloughhouse, CA in 2005-09. Female seed was kept separate across production years. Male Breeder seed (Syn. 1) was produced in field isolation near Sloughhouse in 2003. Male Foundation seed (Syn. 2) was produced from Breeder seed. Hybrid seed (F1) was produced from crossing female seed by either Breeder or Foundation 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety Name 6020HY

Experimental Designation(s) mdSunstra-808

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



Enhancer II (DS709-T)

Breeding History:

Enhancer II 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). All of parent plants trace back to Dairyland experimental in which 55% trace to Enhancer. Parent plants were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2004-2006 to produce Syn. 1 as Breeder Seed.

Area of Probable Adaptation:

Enhancer II 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:

Enhancer II is a moderately dormant variety similar to the fall dormancy 4 check. Enhancer 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.

Enhancer II has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race 1), northern root-knot nematode; resistance to pea aphid and stem nematode. Enhancer II 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 field 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 2008.

PVP Information:

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

Variety Name Enhancer II

Experimental Designation(s) DS709-T

Date NA&MLVRB first accepted this variety 11/29/07

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



FSG 229CR (DS101)

Breeding History:

FSG 229CR is a 60 clone synthetic. The parent clones were selected out of disease nurseries for *Phytophthora* root rot, *Aphanomyces* root rot (Race 1 and Race 2) and rhizomatous crown tendencies. All of parent plants trace back to Dairyland experimentals. Parent plants were planted in field isolation and inter-pollinated by honey, leaf cutting and bumble bees near Sloughhouse, California in 2003 to produce Syn. 1 as Breeder Seed. Seed from parent plants were bulked to produce Breeder seed.

Area of Probable Adaptation:

FSG 229CR is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central, Great Plains and East Central Regions of the United States. The states where it has been tested are Wisconsin and Michigan.

Agronomic and Botanical Characteristics:

FSG 229CR is a dormant variety similar to the fall dormancy 2 check. FSG 229CR 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 229CR has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, northern root-knot nematode; resistance to *Aphanomyces* root rot (Race1). FSG 229CR has not been tested for resistance to stem nematode, blue alfalfa aphid, pea 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 field isolation near Sloughhouse, CA in 2003. 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 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 229CR

Experimental Designation(s) DS101

Date NA&MLVRB first accepted this variety 11/29/07

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



HybriForce-2400 (DS754, msSunstra-802, HybriForce-802)

Breeding History:

HybriForce-2400 is a three clone 75-95% hybrid alfalfa variety consisting of a female, maintainer and restorer line. Parent clones were selected out of forage yield plots and/or disease nurseries. These parent plants were tested for male sterility, maintaining and restoration ability. The parent plants 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 line, maintainer line and restorer line trace to Dairyland experimental germplasms. Female seed (D-1009) was generated by crossing a cytoplasmic male sterile female line by a maintainer line in field isolation and inter-pollinated by honey, leaf cutting and bumble bees. The female plants were harvested to produce the female Breeder Seed near Sloughhouse, California in 2005-9. Female seed was kept separate each year to produce Breeder seed. Male Breeder seed (Syn. 1) (DS764M) was produced in 2003 near Sloughhouse, CA.

Area of Probable Adaptation:

HybriForce-2400 is adapted to the North Central and East Central Regions of the United States and intended for use across the North Central, East Central, Great Plains and Winterhardy Intermountain Regions of the United States. The states where it has been tested are Wisconsin, Minnesota and Michigan.

Agronomic and Botanical Characteristics:

HybriForce-2400 is a moderately dormant variety similar to the fall dormancy 4 check. HybriForce-2400 is very winter hardy similar to the winter survival 2 check. Flower color of the male line in the Syn. 2 generation and female (F1) is 90% purple, 9% variegated, less than 1% white with trace amounts of yellow and cream. The male of HybriForce-2400 is 1% white seeded.

HybriForce-2400 has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race 1), northern root-knot nematode, stem nematode; resistance to **pea** aphid and southern root-knot nematode. HybriForce-2400 has not been tested for resistance to spotted alfalfa aphid and blue alfalfa aphid. HybriForce-2400 has greater forage yield production irrigated with saline water than the tolerant check.

Procedures for Maintaining Seed Stock:

Female Breeder seed was produced by crossing the cytoplasmic male sterile line (A) by the maintainer line (B) in field isolation near Sloughhouse, CA in 2005-09. Female seed was kept separate across production years. Male Breeder seed (Syn. 1) was produced in field isolation near Sloughhouse in 2003. Male Foundation seed (Syn. 2) was produced from Breeder seed. Hybrid seed (F1) was produced from crossing female seed by either Breeder or Foundation 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety Name HybriForce-2400

Experimental Designation(s) DS754, msSunstra-802, HybriForce-802

Date NA&MLVRB first accepted this variety Jan 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted 11/23/10



Profusion-HX (msSunstra-A11)

Breeding History:

Profusion-HX is a three 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-1009) was generated by crossing a cytoplasmic male sterile female clone by a maintainer clone in field isolation and inter-pollinated by honey, leaf cutting and bumble bees. The female clones were harvested to produce the female Breeder Seed near Sloughhouse, California in 2005-7. Female seed was kept separate each year to produce Breeder seed. Male Breeder seed (Syn. 1) (DS1063M) was produced in isolation in 2003 and bulked near Sloughhouse, CA.

Area of Probable Adaptation:

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

Agronomic and Botanical Characteristics:

Profusion-HX is a moderately dormant variety similar to the fall dormancy 4 check. Profusion-HX 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.

Profusion-HX high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode; resistance to stem nematode, pea aphid and southern root-knot nematode. Profusion-HX 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 2005-07. Female seed (D-1009) was kept separate across production years. Male Breeder seed (Syn. 1) (DS1063M) was produced in isolation in 2003 and bulked near Sloughhouse, CA. Male Foundation seed (Syn. 2) (DS1063M) was produced from Breeder seed. The 75-95% hybrid seed (D-1009xDS1063M=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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety name: Profusion-HX Date submitted November 23, 2010

Experimental designations: msSunstra-A11



ReNew (DS916-BR)

Breeding History:

ReNew 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, branch root trait, 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.

Area of Probable Adaptation:

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

Agronomic and Botanical Characteristics:

ReNew is a moderately dormant variety similar to the fall dormancy 4 check. ReNew 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.

ReNew has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1), northern root-knot nematode; resistance to *Aphanomyces* root rot (Race2), pea aphid, stem nematode and moderate resistance to southern root-knot nematode. ReNew 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. Seed from parental clones were bulked. 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety name: ReNew Date submitted November 23, 2010

Experimental designations: DS916-BR



Seneca (DSA02-T)

Breeding History:

Seneca 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). 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.

Area of Probable Adaptation:

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

Agronomic and Botanical Characteristics:

Seneca is a moderately dormant variety similar to the fall dormancy 4 check. Seneca 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.

Seneca 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 *Aphanomyces* root rot (Race2), pea aphid and southern root-knot nematode. Seneca 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. Seed from parental clones were bulked. 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety name: Seneca Date submitted November 23, 2010

Experimental designations: DSA02-T



Sonic (DS914-T)

Breeding History:

Sonic 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). 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.

Area of Probable Adaptation:

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

Agronomic and Botanical Characteristics:

Sonic is a moderately dormant variety similar to the fall dormancy 4 check. Sonic 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.

Sonic has high resistance to bacterial wilt, *Fusarium* wilt, *Phytophthora* root rot, anthracnose (Race 1), *Verticillium* wilt, *Aphanomyces* root rot (Race1 and 2), stem nematode, northern root-knot nematode; resistance to southern root-knot nematode and pea aphid. Sonic 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. Seed from parental clones were bulked. 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 First Offered for Sale:

Certified Seed will be available spring of 2010.

PVP Information:

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

Variety name: Sonic Date submitted November 23, 2010

Experimental designations: DS914-T



6610N (FG 60M1053)

Breeding History:

The selection criteria used in the development of this involved selection of plants for winter active growth and high forage yield and persistence from older trials.

Area of Probable Adaptation:

This variety is adapted to the Southwest and the Moderately Winterhardy Intermountain regions. This variety has been tested in California and Idaho. It will be used in the Southwest and Moderately Winterhardy Intermountain regions.

Agronomic and Botanical Characteristics:

Test variety has fall dormancy similar to FD 6 checks. Flower color (Syn1) is 94% purple, 6% variegated with a trace of cream, yellow and white. This variety has high multifoliolate leaf expression.

This variety has high resistance to Anthracnose (Race 1), bacterial wilt, Fusarium wilt, Phytophthora root rot, pea aphid, spotted alfalfa aphid, root knot nematode (*M. hapla*) and stem nematode. Reaction to blue alfalfa aphid, 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. Breeder seed was produced in the field near Nampa, ID in 2000. Forage Genetics will maintain sufficient foundation seed for the projected life of the variety. Production of Syn3 foundation seed requires the consent of the breeder. Stands of foundation and certified seed fields are limited to 3 and 6 years, respectively.

Date Certified Seed First Offered for Sale:

Certified seed will be marketed in 2007.

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: 6610N Submitted: November 21, 2006

Experimental designations: FG 60M1053

Variety Name 6610N

Experimental Designation(s) FG 60M1053

Date NA&MLVRB first accepted this variety January 16, 2007

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



AmeriStand 409LH (FG 44H369)

Breeding History:

AmeriStand 409LH is a synthetic variety with 16 parent clones. Parent clones were selected for 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.

Area of Probable Adaptation:

AmeriStand 409LH is adapted to the North Central and East Central regions. AmeriStand 409LH has been tested in Indiana, Pennsylvania and Iowa and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

AmeriStand 409LH is Moderately Fall Dormant similar to FD4 check. AmeriStand 409LH is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 52% purple, 32% variegated, 6% white, 6% yellow and 4% cream.

AmeriStand 409LH has high resistance to anthracnose (Race 1), bacterial wilt, Fusarium wilt, Verticillium wilt, Phytophthora root rot, Aphanomyces root rot (Race 1), pea aphid and potato leafhopper; with 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 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 2004. 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 First Offered for Sale:

Certified seed will be marketed in 2011.

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 409LH Date submitted November 30, 2010

Experimental designations: FG 44H369



AmeriStand 445NT (FG 45W271)

Breeding History:

AmeriStand 445NT is a synthetic variety consisting of 14 parent plants. 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 FD4 check. Flower Color (Syn2) is 95% purple, 3% variegated, 2% yellow and a trace of white and cream. It has moderate multifoliolate leaf expression.

This variety has high resistance to bacterial wilt, Fusarium wilt, Phytophthora root rot, spotted alfalfa aphid, stem nematode, anthracnose (Race 1), and root knot nematode (Northern *M. hapla*); with resistance to Verticillium wilt, Aphanomyces root rot (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 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 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	<u>AmeriStand 445NT</u>
Experimental Designation(s)	<u>FG 45W271</u>
Date NA&MLVRB first accepted this variety	<u>January 2010</u>
Date(s) previous amendments were accepted	<u></u>
Date amendment submitted	<u>November 30, 2010</u>



Lancer (FG 44H372)

Breeding History:

Lancer is a synthetic variety with 13 parent clones. Parent clones were selected for 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 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:

Lancer is adapted to the North Central and East Central regions. Lancer has been tested in Indiana, Pennsylvania and Iowa and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

Lancer is Moderately Fall Dormant similar to FD4 check. Lancer is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 48% purple, 23% variegated, 17% yellow, 6% white and 6% cream. Lancer has low multifoliolate leaf expression.

Lancer has high resistance to *Anthracnose* (Race 1), bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, *Phytophthora* root rot, *Aphanomyces* root rot (Race 1), pea aphid and potato leafhopper; 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:

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 2004. 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 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 Lancer

Experimental Designation(s) FG 44H372

Date NA&MLVRB first accepted this variety January 13, 2009

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



Lightning IV (FG 44M316)

Breeding History:

Lightning IV 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:

Lightning IV is adapted to the North Central and East Central regions. Lightning IV has been tested in Nebraska, Wisconsin and Iowa and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

Lightning IV is Moderately Fall Dormant similar to FD4 check. Lightning IV is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 93% purple, 5% variegated and 2% yellow with a trace of white and cream. Lightning IV has high multifoliolate leaf expression.

Lightning IV has high resistance to *Anthracnose* (Race 1), bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, *Phytophthora* root rot, *Aphanomyces* root rot (Race 1) and stem nematode. Reaction to spotted alfalfa aphid, root knot nematode (Northern *M. hapla*), 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 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 in the greenhouse in 2003 and in the field near Nampa, ID in 2004. 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 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 Lightning IV

Experimental Designation(s) FG 44M316

Date NA&MLVRB first accepted this variety January 13, 2009

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



Sun Quest (FG 96T707)

Breeding History:

Sun Quest is a synthetic variety consisting of 85 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:

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 high resistance to Phytophthora root rot, pea aphid, spotted 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, 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 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 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 Sun Quest

Experimental Designation(s) FG 96T707

Date NA&MLVRB first accepted this variety January 12, 2010

Date(s) previous amendments were accepted _____

Date amendment submitted November 30, 2010



WL 350LH.RR (FG R45BD143)

Breeding History:

WL 350LH.RR is a synthetic variety with 105 parent plants. 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, northern root rot nematode, and Aphanomyces root rot (Race 1 and Race 2). Genotypic selection was used to identify the parent plants.

Area of Probable Adaptation:

WL 350LH.RR is adapted to the North Central and East Central regions. WL 350LH.RR has been tested in Indiana, Pennsylvania and Wisconsin and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

WL 350LH.RR is Moderately Fall Dormant similar to FD4 check. WL 350LH.RR is Very Winterhardy, similar to WS2 check. Flower Color (Syn2) is 89% purple, 8% variegated, 3% yellow with a trace of cream and white.

WL 350LH.RR is "Roundup Ready®" expressing tolerance to Roundup® herbicide conferred by the *cp4-epsps* transgene. WL 350LH.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 and 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 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. 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.)

Date Certified Seed First Offered for Sale:

Certified seed will be marketed in 2011.

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 350LH.RR Date submitted November 30, 2010

Experimental designations: FG R45BD143



WL 354HQ (FG 46A113)

Breeding History:

WL 354HQ is a synthetic variety with 65 parent plants. Parent plants were selected for 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.

Area of Probable Adaptation:

WL 354HQ is adapted to the North Central and East Central regions. WL 354HQ has been tested in Idaho, Wisconsin and New York and is intended for use in the North Central and East Central regions.

Agronomic and Botanical Characteristics:

WL 354HQ is Moderately Fall Dormant similar to FD4 check. WL 354HQ is Extremely Winterhardy, similar to WS1 check. Flower Color (Syn2) is 96% purple, 3% variegated, 1% white with a trace of yellow and cream. WL 354HQ has high multifoliolate leaf expression.

WL 354HQ 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), pea aphid and spotted alfalfa aphid; with 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 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 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 First Offered for Sale:

Certified seed will be marketed in 2011.

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 354HQ Date submitted November 30, 2010

Experimental designations: FG 46A113



FG 72T033 (FG 72T033)

Breeding History:

FG 72T033 is a synthetic variety consisting of 110 parent plants. Plants were selected based on forage yield, fall dormancy reaction, persistence, pest resistance and for 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 Southwest regions. This variety has been tested in Idaho and California and is intended for use in the Moderately Winterhardy Intermountain and Southwest regions.

Agronomic and Botanical Characteristics:

Test variety is Non-Dormant similar to FD7 check. Flower Color (Syn2) is 100% purple with a trace of variegated, white, cream and yellow.

Test variety has high resistance to anthracnose (Race 1), Fusarium wilt, Phytophthora root rot and stem nematode; with resistance to bacterial wilt and pea aphid. Reaction to Aphanomyces root rot, Verticillium wilt, spotted alfalfa aphid, blue alfalfa aphid and root knot nematode (Northern *M. hapla*) 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 2002. 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 First Offered for Sale:

Certified seed will be marketed in 2011.

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: _____ Date submitted November 30, 2010

Experimental designations: FG 72T033



Legacy-449Aph2 (LS 702)

Breeding History:

Legacy-449Aph2 is a synthetic variety with 98 parent plants. The parent plants trace to 3 populations that were selected for resistance to *Aphanomyces* root rot (Race 1 and Race 2). The *Aphanomyces* resistant plants were transplanted to a performance nursery near Evansville, WI. The 98 parent plants were selected phenotypically based on high forage yield, good winter survival, and the absence of root and crown diseases. Seed of the selected plants was produced in an isolation field near Nampa, ID.

Area of Probable Adaptation:

This variety is adapted to the North Central and East Central regions of the U.S. It will be used primarily for hay, haylage, greenchop and dehydration. It has been tested in Wisconsin and is intended for use in the North Central and East Central regions of the United States.

Agronomic and Botanical Characteristics:

This variety is a moderately fall dormant cultivar with a fall dormancy similar to the FD 4 check. Flower color in the Syn 2 generation is approximately 95% purple and 5% variegated with traces of cream, yellow and white.

This variety 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). Resistance to stem nematode, pea aphid, spotted alfalfa aphid, blue alfalfa aphid, and root-knot nematode has not been determined.

Procedures for Maintaining Seed Stock:

Seed classes for this cultivar will be breeder (Syn 1), foundation (Syn 2), and certified (Syn 2 or Syn 3). Stand life will be limited to 1, 3, and 6 years for breeder, foundation, and certified seed, respectively. Legacy Seeds will maintain sufficient seed stocks for the life of this variety. Breeder seed was produced near Nampa, Idaho in 2007.

Date Certified Seed First Offered for Sale:

Seed may be marketed in 2010.

PVP Information:

Plant Variety Protection will not be applied for. This information can be forwarded to the PVP office.

Variety Name: Legacy-449Aph2 Date submitted 18 November 2010

Experimental designations: LS 702



54Q32 (04FQEXP1)

Breeding History:

54Q32 is a synthetic variety with 14 parent clones. The selection criteria used in the development of this variety include forage yield, forage quality, persistence and resistance to one or more of the following pests: bacterial wilt, Fusarium wilt, Verticillium wilt, anthracnose (Race 1), Phytophthora root rot, and Aphanomyces root rot (Race 1). Syn1 seed was harvested in total on all parents and bulked to form breeder seed in 2000.

Area of Probable Adaptation:

54Q32 is adapted to the North Central, East Central and Moderately Winterhardy Intermountain regions of the US. This variety has been tested in Wisconsin, Washington, Illinois and Iowa, and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain, Winterhardy Intermountain, Great Plains regions of the US and Canada.

Agronomic and Botanical Characteristics:

54Q32 is Moderately Dormant, similar to FD4 check. Flower color (Syn2) is 76% purple, 23% variegated and 1% cream with a trace of yellow and white. 04FQEXP1 has high resistance to anthracnose (Race 1), bacterial wilt, Phytophthora root rot, Verticillium wilt, Fusarium wilt, Aphanomyces root rot (Race 1); with resistance to spotted alfalfa aphid, pea aphid and root-knot nematode (*M. hapla*); and low resistance to stem nematode. 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 or Syn 3), and certified (Syn 3, Syn 4 or Syn 5) classes will be recognized. Production of Syn 2 or Syn 3 foundation seed requires consent of the breeder. Breeder seed was produced in the field near Nampa Idaho in 2000. 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 6 years, respectively.

Date Certified Seed First Offered for Sale:

Certified seed may be marketed in 2008.

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: 54Q32 Date submitted December 3, 2007

Experimental designations: 04FQEXP1

Variety Name 54Q32

Experimental Designation(s) 04FQEXP1

Date NA&MLVRB first accepted this variety January 15, 2008

Date(s) previous amendments were accepted _____

Date amendment submitted December 1, 2008



55H94 (07W03CZ, W07CZ78)

Breeding History:

55H94 is a synthetic variety with 19 parent clones. Parent clones were selected from Pioneer experimentals for forage yield, persistence and or resistance to one or more of the following pests: potato leafhopper, bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, anthracnose (Race 1), *Phytophthora* root rot, and *Aphanomyces* root rot (Race 1 & 2). Parent clones were identified using a combination of genotypic and phenotypic selection in nursery and agronomic tests.

Area of Probable Adaptation:

55H94 is adapted to the North Central and East Central regions of the US. This variety has been tested in Illinois and Wisconsin, and is intended for use in the North Central, East Central, Moderately Winterhardy Intermountain, Winterhardy Intermountain and the Great Plains regions of the US and Canada.

Agronomic and Botanical Characteristics:

55H94 is Moderately Dormant, similar to FD5 check. Flower color (Syn2) is 90% purple, 1% cream, 8% variegated and 1% white with a trace of yellow.

55H94 is highly resistant to anthracnose (Race 1), bacterial wilt, *Aphanomyces* root rot (Race 1), *Verticillium* wilt, *Fusarium* wilt, spotted alfalfa aphid, *Phytophthora* root rot, and potato leafhopper; with resistance to stem nematode, pea aphid, *Aphanomyces* root rot (Race 2), and root-knot nematode (*M. hapla*). 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, one generation of foundation and two generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2) and certified (Syn 3 or Syn 4) classes will be recognized. Breeder seed was produced in the greenhouse in 2006 in Arlington, WI and under cage in 2007 in Connell, WA. 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.

Date Certified Seed First Offered for Sale:

Certified seed may be marketed in 2011.

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.

Variety Name: 55H94 Date submitted November 30, 2010

Experimental designations: 07W03CZ, W07CZ78



55V50 (07W06PX, W07PX61)

Breeding History:

55V50 is a synthetic straincross variety in which 192 plants used as a pollen source were crossed to 13 parent clonal plants as pollen recipients. The pollen donor plants trace to a Pioneer experimental with winterhardiness, forage yield, persistence, and resistance to *Aphanomyces* root rot (Race 1 & 2), and were selected phenotypically for one or more of the following pests: bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, and *Aphanomyces* root rot (Race 1 & 2), *Phytophthora* root rot and field performance. Each of the thirteen parent clonal plants were selected for forage yield, persistence and or resistance to one or more of the following pests: bacterial wilt, *Fusarium* wilt, *Verticillium* wilt, anthracnose (Race 1), *Phytophthora* root rot, stem nematode, northern root knot nematode (*M. hapla*) and *Aphanomyces* root rot (Race 1 & 2). Parent clonal plants were identified using a combination of genotypic and phenotypic selection in nursery and agronomic tests.

Area of Probable Adaptation:

55V50 is adapted to North Central, East Central, and the Moderately Winterhardy Intermountain regions of the US and to Canada. This variety has been tested in Minnesota, Wisconsin, Ohio, Washington and Canada, and is intended to use in the North Central, East Central, the Moderately Winterhardy Intermountain, Winterhardy Intermountain and the Great Plains regions of the US and Canada.

Agronomic and Botanical Characteristics:

55V50 is Moderately Dormant, similar to FD5 check. Flower color (Syn2) is 98% purple, 1% cream and 1% white with a trace of variegated and yellow.

55V50 is highly resistant to anthracnose (Race 1), bacterial wilt, *Aphanomyces* root rot (Race 1), *Aphanomyces* root rot (Race 2), *Verticillium* wilt, root-knot nematode (*M. hapla*) and *Phytophthora* root rot; with resistance to *Fusarium* wilt, stem nematode, pea aphid, 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 of breeder, two generations of foundation and three generations of certified seed classes. Breeder (Syn 1), foundation (Syn 2 or Syn 3) and certified (Syn 3, Syn 4 or Syn 5) classes will be recognized. Breeder seed was first produced in Arlington WI in 2005. 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 6 years, respectively.

Date Certified Seed First Offered for Sale:

Certified seed may be marketed in 2011.

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.

Variety Name: 55V50 Date submitted November 30, 2010

Experimental designations: 07W06PX, W07PX61



SW 6330 (SW 6330)

Breeding History:

This synthetic variety was developed using the outdoor cage crossing method with both honey bees and leaf cutting bees. The selection criteria used in the development of this variety include forage yield, and resistance to pea aphid, spotted alfalfa aphid, Phytophthora root rot and Southern root knot nematode (*m. incognita*).

SW 6330 is adapted to the Southwest and Great Plains regions. This variety has been tested in California and New Mexico and is intended for use in the Southwest and Great Plains regions.

Agronomic and Botanical Characteristics:

This variety is Moderately Dormant, similar to FD 6 check. Flower Color (Syn 2) is 97% purple and 3% variegated. SW 6330 has high resistance to pea aphid; with resistance to spotted alfalfa aphid, Fusarium Wilt, Bacterial Wilt, anthracnose (Race 1), Phytophthora root rot, and Southern root knot nematode (*M. incognita*); moderate resistance to stem nematode and blue alfalfa aphid; low resistance to Verticillium wilt. Reaction to Aphanomyces root rot (Race 1) has not been tested.

Procedures for Maintaining Seed Stock:

Breeder seed was produced in the field near Mendota, California in 2003. S & W Seed Company will maintain seed stocks of this variety. 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.

Date Certified Seed First Offered for Sale:

Certified seed will be marketed in 2009.

PVP Information

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

Variety Name: SW 6330

Experimental Designation(s): SW 6330

Date NA&MLVRB first accepted this variety: January 2009

Date(s) previous amendments were accepted: N/A

Date amendment submitted November 18, 2010



GA-9908 (GA-9908; BGZ2)

Breeding History:

GA-9908 red clover was developed from 'Redland III' as a parental base using 2 cycles of phenotypic recurrent selection. Genotypes selected to advance from cycle 1 to cycle 2, and to become the parents of the final synthetic cultivar, were the best survivors after exposure to intensive grazing with grass competition near Eatonton, GA. One hundred (approximately) surviving plants were kept during each cycle. The Syn 1 population was composited by bulking all seed from each selected genotype after inter-mating in isolation in Idaho in 1999. Breeder seed (Syn 2) was then produced by increasing the Syn 1 population in isolation in Idaho during 2001.

Area of Probable Adaptation:

GA-9908 is adapted to the southeastern USA and is intended for use in those areas as an adapted, grazing tolerant variety. It has been tested in Georgia.

Agronomic and Botanical Characteristics:

GA-9908 is a diploid, perennial, medium red clover. Its flower color is 75% medium pink, 12% light pink, 13% dark pink, and a trace of white. Approximately 71% of the plants exhibit leaf marks and 90% have hairs on the stems. It is highly resistant to southern Anthracnose and resistant to northern anthracnose. Approximately 99% of the plants bloom in the seeding year (fall seeding with a following spring determination). GA-9908 reaches 50% bloom approximately 6 days earlier than Kenland in the spring growth of the first year after seeding the previous fall.

Procedures for Maintaining Seed Stock:

Seed increase of GA-9908 is limited to one generation of breeder (Syn 2), two generations of foundation (Syn 3 or Syn 4), and three generations of certified (Syn 3, Syn 4, and Syn 5) classes. Breeder seed of GA-9908 was produced in isolation in Idaho in 2001 for the life of the variety and is maintained in cold storage at the Seed Lab, Crop and Soil Science Dept, University of Georgia, Athens, GA. Length of stand allowed is 2 years and 3 years each for the foundation and certified classes, respectively.

Date Certified Seed First Offered for Sale:

2003

PVP Information:

Application will not be made of Plant Variety Protection. Information in this application may be forwarded to the PVP office.

Variety Name: GA-9908 Date submitted 11-30-09

Experimental designations: GA-9908; BGZ2



CW 9901 (CW 9901)

Breeding History:

CW 9901 is a synthetic variety with 200 parent plants that were selected sequentially for winter hardiness, high leaf to stem ratio, vigor, forage yield and resistance to northern anthracnose and mosaic virus. Parent plants were selected from three-year old Wisconsin yield trials and nurseries. CW 9901 was derived from the following varieties: CW 5048, Duration, StarFire, Impact, RedStar, Concorde, Reddy, and miscellaneous Cal/West Seeds breeding populations. Breeder seed (Syn.1) was produced under cage isolation near Woodland, California in 1999. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 9901 is adapted to and intended for use in the North Central and East Central areas of the U.S. and eastern Canada. The intended use is for hay, haylage, greenchop, and pasture. It has been tested in Wisconsin, Kentucky, and Quebec Canada.

Agronomic and Botanical Characteristics:

CW 9901 has approximately 58% of plants with leaf markings. Approximately 98% of CW 9901 plants have medium pink flower color with 2% red flower color. CW 9901 has approximately 90% of plants with stems having hairs perpendicular or pointing down, and 10% with hairs projecting upward.

Procedures for Maintaining Seed Stock:

Seed increase of CW 9901 is on a limited generation basis with two generations of the 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 1999. 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 years.

Date Certified Seed First Offered for Sale:

Certified seed of CW 9901 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 9901



CW 040040 (CW 040040)

Breeding History:

CW 040040 is a synthetic variety with 225 parent plants that were selected sequentially for winter hardiness, high leaf to stem ratio, vigor, forage yield and resistance to northern anthracnose and mosaic virus. Parent plants were selected from three-year old Wisconsin yield trials and nurseries. CW 040040 was derived from the following varieties: Duration, Redland Grazer II, Marathon, CW 5048, StarFire, Cinnamon Plus, Kenland, Scarlett, Impact, Morning Star, Medium, and miscellaneous Cal/West Seeds breeding populations. Breeder seed (Syn.1) was produced under cage isolation near Woodland, California in 2004. Seed was bulk harvested from all parent plants.

Area of Probable Adaptation:

CW 040040 is adapted to and intended for use in the North Central and East Central areas of the U.S.. The intended use is for hay, haylage, greenchop, and pasture. It has been tested in Wisconsin, Kentucky, Michigan, New York, and Tennessee.

Agronomic and Botanical Characteristics:

CW 040040 has approximately 45% of plants with leaf markings. Approximately 98% of CW 040040 plants have medium pink flower color with 2% red flower color. CW 040040 has approximately 78% of plants with stems having hairs perpendicular or pointing down, 17% with hairs projecting upward, and 5% with glabrous stems.

Procedures for Maintaining Seed Stock:

Seed increase of CW 040040 is on a limited generation basis with two generations of the 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 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 years.

Date Certified Seed First Offered for Sale:

Certified seed of CW 040040 will be available in 2011.

PVP Information:

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

Variety Name: _____ Date submitted December 1, 2010

Experimental designations: CW 040040

