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Exhibit C

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
Alfalfa (*Medicago sativa*, *sensu* Gunn et al.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME

ADDRESS *(Street and No. or RD No., City, State, Zip Code, and Country)*	FOR OFFICIAL USE ONLY PVPO NUMBER

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties centered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: _____.
Please answer all questions for your variety; lack of response may delay progress of your application.

1. FALL DORMANCY: (Determined From Spaced Plantings)

TESTING INSTITUTION AND LOCATION	DATE OF LAST CUT	DATE REGROWTH SCORED	REGROWTH SCORE OR AVERAGE HEIGHT						
			APPLICATION VARIETY	CHECK VARIETIES*			LSD .05	CV	$\overline{X}$

(* The varieties in parentheses are acceptable check varieties; application varieties must be bracketed by check varieties)

☐ CLASS

1 = Very Non-Dormant ('CUF 101', 'Mecca', '5929')
2 = Non-Dormant ('Moapa 69', '5715', 'Pierce')
3 = Non-Dormant (Mesilla', 'Sutter', 'Malone')
4 = Moderately Dormant ('Lahontan', '581', 'Express')
5 = Moderately Dormant ('Excalibur', 'Du Puits', '555')
6 = Moderately Dormant ('Saranac', 'WL 316', 'Legend')
7 = Dormant ('Ranger', 'Arrow', 'WL 317')
8 = Dormant ('Vernal', '526', 'Wrangler')
9 = Very Dormant ('Norseman', '5151', 'Spredor 2')

Specify Scoring System Used: _____

☐ FALL GROWTH HABIT (Determined from Fall Dormancy Trials)

1 = Erect ('CUF 101')
3 = Semi-erect ('Mesilla')
5 = Intermediate ('Saranac AR')
7 = Semi-Decumbent ('Vernal')
9 = Decumbent ('Norseman')

2. RECOVERY AFTER FIRST SPRING CUT: (In Southwest, first cut after March 21)

☐ 1 = Very Fast (CUF101) 3 = Fast ('Mesilla') 5 = Intermediate ('Ranger') 7 = Slow ('Vernal') 9 = Very Slow ('Norseman')

TEST LOCATION: _____

3. AREAS OF ADAPTATION IN THE U.S.:

Describe the area for which this variety is adapted; that is, define geographically, or in terms of climate and soils, the region(s) in which it may reasonably be expected to perform well.
THIS CHARACTERIZATION MUST BE SUPPORTED BY TEST LOCATIONS AND DATA ON PERSISTENCE.

4. FLOWERING DATE: (When 10% of plants possesses open flowers at the time of the first Spring cut)

☐☐ Days Earlier Than ..... ☐
☐☐ ..... Same as ..... ☐
☐☐ Days Later Than ..... ☐

Please make all 3 comparisons if possible.

1 = 'CUF 101' 2 = 'Mesilla' 3 = 'Saranac' 4 = 'Vernal' 5 = 'Norseman'

Test Location: _____

5. PLANT COLOR: (Determined from healthy regrowth 3 weeks after first Spring cut, controlling leafhoppers if necessary)

☐ 1 = Very Dark Green ('5246') 2 = Dark Green ('Vernal') 3 = Light Green ('Ranger')

Color Chart Value (Specify Chart Used) _____

Application Variety _____

'Vernal' _____

Test Location _____

6. CROWN TYPE: (Determined from Spaced Plants)

☐

Non-creeping Types 1 = Broad ('Vernal') 2 = Intermediate ('Sarnac AR') 3 = Narrow ('CUF 101')

Creeping Types 4 = Creeping Rooted ('Rangelander') 5 = Rhizomatous ('Rhizoma')

7. FLOWER COLOR: (Determine frequency of plants for each color class as defined by the USDA Agricultural Handbook No. 424 (Barnes 1972), allowing all plants in plot to flower)

☐☐☐ % Purple and Violet (Subclasses 1.1 to 1.4)
☐☐☐ % Variegated (Subclasses 2.1 to 2.9)
☐☐☐ % Cream (Class 3)
☐☐☐ % Yellow (Subclasses 4.1 to 4.4)
☐☐☐ % White (Class 5)

Test Location: _____

8. POD SHAPE: (Determine Frequency of plants with the following pod shapes produced on well cross-pollinated racemes)

☐☐☐ % Tightly Coiled (one or more coils, center more or less closed).
☐☐☐ % Loosely Coiled (one or more coils, center conspicuously open).
☐☐☐ % Sickle (Less than one coil).

Test Location: _____

9. PEST AND DISEASE RESISTANCE: Provide in the appropriate space, trial data for application variety and appropriate resistant (R) and susceptible (S) check varieties, resistant class, year tested, synthetic generation tested, number of plants tested, least significant different statistics (LSD .05), coefficient of variance (CV), experimental mean (x), the institution in charge of test, and location of test, and whether test is a field or laboratory evaluation. Data must be from test conducted by private firms, agricultural experiment stations or the USDA. Describe scoring system and any test procedure, which differs from those approved by the NAAIC. Resistance levels should be characterized using % resistant plants as follows: S = <6%, LR = 6-14%, MR = 15-30%, R = 31-50%, HR = >50%. Checks should be used on long-term resistance averages as approved by the NAAIC. Data must be adjusted to the long-term mean of the resistant check variety. Supply both adjusted and unadjusted values. Trial data from other test years or locations should be obtained whenever available on a separate document as Exhibit D. Seeds of the check varieties and germplasm lines below can be obtained from the USD Soybean & Alfalfa Research Laboratory, Building 002, Room 10, BARC-West, Beltsville, MD, 20705. Comparison is required with check varieties listed below; data must be adjusted according to the expected value of the resistant check. State who made the adjustment.

A. DISEASE RESISTANCE:

ANTHRACNOSE (Race 1) (*Colletotrichum trifolii*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Arc' or 2. 'Sarnac AR' 3. 'Sarnac'	 HR 65% R 45% S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

ANTHRACNOSE (Race 2) (*Colletotrichum trifolii*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1.'Sarnac AR' or 2. 'Arc' 3. 'Sarnac'	 HR 45% R S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

APHANOMYCES ROOT ROT (Race 1) (*Aphanomyces euteiches*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. WAPH-1' 2. 'Agate'	 R 50% S 1%			
L.S.D. (.05) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

A. DISEASE RESISTANCE: (Continued)

APHANOMYCES ROOT ROT (Race 2) (*Aphanomyces euteiches*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'WAPH-1' 2. 'Agate'	 R 50% S 1%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

BACTERIAL WILT (*Clavibacter michiganese*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Vernal' 2. 'Narragansett' 3. or 'Sonora'	 R 42% S 1% S 1%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

COMMON LEAFSPOT (*Pseudopeziza medicaginis*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'MSA-CW3ANS3' 2. or 'Ramsey' 3. 'Ranger' 4. 'Moapa 69'	 HR 60% HR 50% MR 30% S 0-10%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

A. DISEASE RESISTANCE: (Continued)

DOWNY MILDEW (*Peronospora trifoliorum*) Isolate, if known

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'KS208' 2. 'Saranac' isolates 15 & 17 isolate 18 3. 'Kanza'	 HR 80% MR 15-20% R 50-60% S 0-5%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

FUSARIUM WILT (*Fusarium oxysporum* f. *medicaginis*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Agate' 2. 'MNGN-1'	 HR 54% S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

PHYTOPHTHORA ROOT ROT (*Phytophthora megasperma* f. *medicaginis*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Agate' 2. 'Saranac'	 R 43% S 3%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

A. DISEASE RESISTANCE: (Continued)

VERTICILLIUM WILT (*Verticillium albo-atrum*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Vertus' or 2. 'Oneida VR' 3. 'Saranac'	 R 40% HR 60^ S 2%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

OTHER (Specify)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 2. 3.	 S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

B. INSECT RESISTANCE:

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'CUF 101' 2. 'PA-1' or 3. 'Caliverde'	 HR 55% S 10% S 3%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

B. INSECT RESISTANCE: (Continued)

PEA APHID (*Acyrthosiphon pisum*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'CUF101' or 2. 'PA-1' or 3. 'Baker' 4. 'Vernal' or 5. 'Maopa 69'	 HR 55% HR 55% R 45% S 5% S 5%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

SPOTTED ALFALFA APHID (*Therioaphis maculata*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'CUF 101' or 2. 'Baker' 3. 'Arc' or 4. 'Caliverde'	 HR 60% R 50% S 3% S 3%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

POTATO LEAFHOPPER YELLOWING (*Empoasca fabæ*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'MSA-CW3AN3' 2. 'Ranger'	 R 70% S 5%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

B. INSECT RESISTANCE: (Continued)

OTHER (Specify)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 2. 3.	 S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

C. NEMATODE RESISTANCE:

NORTHERN ROOT KNOT NEMATODE (*Meloidogyne hapla*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Nevada Syn XX' 2. 'Lahontan'	 HR 90% S 3%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

SOUTHERN ROOT KNOT NEMATODE (*Meliodogyne incognita*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Moapa 69' 2. 'Lahontan'	 R 50% S 3%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

C. NEMATODE RESISTANCE: (Continued)

STEM NEMATODE (*Ditylenchus dipsaci*)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 'Vernema' or 2. 'Lahontan' 3. 'Ranger' or 4. 'Moapa 69'	 R 60% R 40% S 5% S 1%			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

OTHER (Specify)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 2. 3.	 S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

OTHER (Specify)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 2. 3.	 S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____

9. PEST AND DISEASE RESISTANCE: (Continued)

C. NEMATODE RESISTANCE: (Continued)

OTHER (Specify)

Test conducted by _____ at _____

Variety	Resistance/Class Expected Value	Syn. Gen. Tested	Unadjusted % Resistance	Number of Plants Tested
This Variety 1. 2. 3.	 S			
L.S.D. (.05) C.V. (%) $\overline{X}$				

Field or Laboratory/Year Tested _____

Scoring System Used _____