

A REPORT OF THE  
**SMALL GRAIN VARIETY REVIEW BOARD**



**ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES**

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SMALL GRAIN VARIETY REVIEW BOARD

ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES  
August 2018

The Association of Official Seed Certifying Agencies (AOSCA), Small Grain Variety Review Board (SGVRB), reviewed the following varieties on August 7, 2018. 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 Small Grain Variety Review Board by the applicants. The Small Grain Variety Review Board makes judgments regarding recommendation of varieties for inclusion into certification based on the data supplied. Beyond that, the Small Grain 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 detail regarding the Small Grain Variety Review Board can be obtained from:

Chet Boruff, Chief Executive Officer  
Association of Official Seed Certifying Agencies  
1601 52nd Ave., Suite 1  
Moline, IL 61265

Phone: 309-736-0120  
Fax: 309-736-0115  
E-Mail: [cboruff@aosca.org](mailto:cboruff@aosca.org)

Respectfully submitted,

Rick Novak, Chairman  
Small Grain Variety Review Board

## 2018 AOSCA SMALL GRAIN VARIETY REVIEW BOARD

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# Wheat

## M14C1030 (Exp)

1. M14C1030 is a hard red spring wheat variety developed by 21<sup>st</sup> Century Genetics and Global Soy Genetics, and owned by Global Soy Genetics.
2. M4C1030 was selected for yield, quality, disease tolerance and agronomic characteristics in growth chambers and in the field using modified single seed descent.
3. M14C1030 was tested in the Red River Valley of North Dakota/Minnesota and is well-adapted to be a quality hard red spring bread wheat in the wheat production areas of North Dakota and Minnesota.
4. No claims are being made as to the disease and insect resistance of M14C1030.
5. Identifying characteristics:

1. Kind:	Common, Hard Red Spring Wheat		
2. Seasonal Growth Habit:	Spring	16. Awn Type:	Awned
3. Coleoptile Color:	White	17. Awn Color:	White
4. Juvenile Growth Habit:	Erect	18. Glume Color:	White/Amber
5. Leaf Color at Boot:	Yellow-Green	19. Glume Length:	Medium
6. Flag Leaf at Boot:	Erect, Twisted, Wax Present	20. Shoulder Shape:	Square
7. Auricle Color:	White	21. Shoulder Width:	Medium
8. Day(s) to 50% Heading:	62 days after planting	22. Beak Shape:	Acuminate
9. Anther Color:	Yellow	23. Beak Length (S,M,L,VL):	Medium
10. Anthocyanin:	Absent	24. Glume Pubescence:	Present
11. Plant Height (cm):	75	25. Seed Color:	Red
12. Internodes:	Hollow	26. Seed Shape:	Oval
13. Spike Shape:	Oblong	27. Cheeks:	Rounded
14. Spike Density:	Mid Dense	28. Brush Size (S,M,L.):	Medium
15. Spike Curvature:	Inclined	29. Avg 1,000 Kernel Wt (grams):	36

30. Physiological/biochemical Traits: None

Variants and frequency: 1/1000 talls 12 cm above the canopy.

6. Recognized classes of M14C1030 are breeder, foundation, registered and certified. Global Soy Genetics will maintain the variety by head-row purification method to produce breeder seed as needed.
7. Certified Seed will be offered for sale in 2019.
8. Application will be made for PVP (Title V) protection.
9. Seed production acreage of M14C1030 is not to be published by AOSCA or other seed certifying agencies.

Date this application was submitted: Jun 14, 2018

Date recommended by the VRB: Aug 29, 2018



**Wheat**  
**6964910**  
**FA9S10-0049R (Exp Des)**  
**(Amended – Variant Change)**

Variety Name 6964910  
 Experimental Designation(s) FA9S10-0049R  
 Date SGVRB first recommended this variety 2017  
 Date(s) any previous amendments were recommended \_\_\_\_\_  
 Date this amendment was submitted April 27, 2018

1. FA9S10-0049R is a hard red wheat developed by the Monsanto LLC.
2. In early generations of FA9S10-0049R, single spikes were selected based on agronomics and disease resistance. Later generations were selected based on yield, quality, and disease resistance.
3. FA9S10-0049R is adapted to the Hard Spring wheat growing regions of Northern Plains.
4. No claims about disease resistance are made at this time.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Spring Wheat</u>	
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)	
2. Seasonal Growth Habit:	<u>Spring</u>	16. Awn Type: <u>Awned</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color: <u>White</u>
4. Juvenile Growth Habit:	<u>Semi-erect</u>	18. Glume Color: <u>White/Amber</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length: <u>No data</u>
6. Flag Leaf at Boot:	<u>Recurved, Twisted, No Wax</u>	20. Shoulder Shape: <u>Elevated</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width: <u>Narrow</u>
8. Day(s) to 50% Heading:	<u>183</u>	22. Beak Shape: <u>Acuminate</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S.M.L.VL): <u>L</u>
10. Anthocyanin:	<u>Absent</u>	24. Glume Pubescence: <u>Absent (Glabrous)</u>
11. Plant Height (cm):	<u>76.2</u>	25. Seed Color: <u>Red</u>
12. Internodes:	<u>Hollow</u>	26. Seed Shape: <u>Oval</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks: <u>Rounded</u>
14. Spike Density:	<u>Lax</u>	28. Brush Size (S,M,L.): <u>Short</u>
15. Spike Curvature:	<u>Inclined</u>	29. Avg 1,000 Kernel Wt (g): <u>48.5</u>

30. Physiological/biochemical Traits:

Variants and frequency: A variant that is similar to FA9S10-0049R but has white seed occurs at a frequency of up to 0.50% (50 out 10,000 seeds). A variant that is similar to F9N12-0151 but is 15cm to 20cm taller occurs at a frequency of up to .2% (20/10,000). A bronze head variant may occur at a frequency of .1% (10/10,000). An awnless variant may occur at a frequency of .1% (10/10,000).

6. Recognized classes of FA9S10-0049R are breeder, foundation, registered, and certified. Monsanto Company will maintain the variety by the head-row purification method to produce breeder seed as needed and all foundation seed. Royalty fees and/ or licensing agreements are anticipated.
7. Commercial seed of FA9S10-0049R will likely be ready for commercial sale by the spring of 2018.
8. Application for a Utility Patent and PVP is anticipated for FA9S10-0049R and the option for Title V will not be taken.
9. Certified seed production acreage is not to be published by AOSCA and individual certifying agencies.

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 7, 2018



**Wheat**  
**122010W**  
**07SO274-2 (Exp)**

1. 122010W a hard red spring wheat bred and developed by Syngenta Participations AG
2. 122010W was selected for height, straw strength, maturity, foliar diseases, scab reaction
3. 122010W is primarily adapted primarily for the Northern Plains of the USA.
4. 122010W is moderately susceptible to moderately resistant to Fusarium Head Blight.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Spring Wheat</u>		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	<u>Spring</u>	16. Awn Type:	<u>Awne</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color:	<u>White</u>
4. Juvenile Growth Habit:	<u>Erect</u>	18. Glume Color:	<u>White/Amber</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length:	<u>Short</u>
6. Flag Leaf at Boot:	<u>Recurved, Twisted, Wax Present</u>	20. Shoulder Shape:	<u>Oblique</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width:	<u>Medium</u>
8. Day(s) to 50% Heading:	<u>58</u>	22. Beak Shape:	<u>Acute</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S,M,L,VL):	<u>Medium</u>
10. Anthoncyanin:	<u>Absent</u>	24. Glume Pubescence:	<u>Absent</u>
11. Plant Height (cm):	<u>80</u>	25. Seed Color:	<u>Red</u>
12. Internodes:	<u>Hollow</u>	26. Seed Shape:	<u>Ovate</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks:	<u>Rounded</u>
14. Spike Density:	<u>Lax</u>	28. Brush Size (S,M,L.):	<u>Medium</u>
15. Spike Curvature:	<u>Inclined</u>	29. Avg 1,000 Kernel Wt (grams):	<u>32</u>

30. Physiological/biochemical Traits:

Variants and frequency: Less than 0.8% of the plants were rogued from the breeder seed increase at Berthoud, CO. Approximately 95% of the rogued variant plants were taller height wheat plants (8 to 15 cm). Up to 1.0% variant plants may be encountered in subsequent generations.

6. Syngenta Seeds, LLC. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, LLC. will maintain the variety by the head row/progeny method to produce breeder seed as needed.
7. Certified seed will likely be available in the Spring of 2019
8. Plant Variety Protection is anticipated in 2018 without the option for Title V.
9. Certified acreage is not to be published by AOSCA and certifying agencies

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 27, 2018



**Wheat**  
**SY 611 CL2**  
**10S0176-18 (Exp)**

1. SY 611 CL2 is a hard red spring wheat bred and developed by Syngenta Participations AG
2. SY 611 CL2 was selected for height, maturity, and herbicide tolerance.
3. SY 611 CL2 is primarily adapted to the wheat growing areas of North Dakota and Montana.
4. No additional claims.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Spring Wheat</u>		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	<u>Spring</u>	16. Awn Type:	<u>Awne</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color:	<u>White</u>
4. Juvenile Growth Habit:	<u>Erect</u>	18. Glume Color:	<u>White/Amber</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length:	<u>Medium</u>
6. Flag Leaf at Boot:	<u>Recurved, Twisted, Wax Absent</u>	20. Shoulder Shape:	<u>Elevated</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width:	<u>Medium</u>
8. Day(s) to 50% Heading:	<u>58</u>	22. Beak Shape:	<u>Acuminate</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S,M,L,VL):	<u>Medium</u>
10. Anthoncyanin:	<u>Absent</u>	24. Glume Pubescence:	<u>Present</u>
11. Plant Height (cm):	<u>72</u>	25. Seed Color:	<u>Red</u>
12. Internodes:	<u>Hollow</u>	26. Seed Shape:	<u>Ovate</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks:	<u>Angular</u>
14. Spike Density:	<u>Lax</u>	28. Brush Size (S,M,L.):	<u>Medium</u>
15. Spike Curvature:	<u>Erect</u>	29. Avg 1,000 Kernel Wt (grams):	<u>34</u>

30. Physiological/biochemical Traits:

Variants and frequency: Variant plants are taller in height by 8 to 15 cm. Up to 1% taller variant plants may be encountered in subsequent generations.

6. Syngenta Seeds, LLC. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, LLC. will maintain the variety by the head row/progeny method to produce breeder seed as needed.
7. Certified seed will likely be available in the Spring of 2019.
8. Plant Variety Protection is anticipated in 2018 and SY 611 CL2 may only be sold as a class of certified seed.
9. Certified acreage is not to be published by AOSCA and certifying agencies

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 27, 2018



# Wheat

## SY Longmire 09S0306-24 (Exp)

1. SY Longmire is a hard red spring wheat bred and developed by Syngenta Participations AG.
2. SY Longmire was selected for height, straw strength, stem solidness
3. SY Longmire is primarily adapted to Western areas of North Dakota and Montana.
4. SY Longmire is moderately susceptible to foliar disease and fusarium head blight.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Spring Wheat</u>		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	<u>Spring</u>	16. Awn Type:	<u>Awned</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color:	<u>White</u>
4. Juvenile Growth Habit:	<u>Erect</u>	18. Glume Color:	<u>White/Amber</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length:	<u>Medium</u>
6. Flag Leaf at Boot:	<u>Recurved, Twisted, Wax Absent</u>	20. Shoulder Shape:	<u>Elevated</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width:	<u>Narrow</u>
8. Day(s) to 50% Heading:	<u>56</u>	22. Beak Shape:	<u>Acuminate</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S,M,L,VL):	<u>Medium</u>
10. Anthoncyanin:	<u>Absent</u>	24. Glume Pubescence:	<u>Present</u>
11. Plant Height (cm):	<u>76</u>	25. Seed Color:	<u>Red</u>
12. Internodes:	<u>Solid</u>	26. Seed Shape:	<u>Ovate</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks:	<u>Angular</u>
14. Spike Density:	<u>Lax</u>	28. Brush Size (S,M,L.):	<u>Long</u>
15. Spike Curvature:	<u>Erect</u>	29. Avg 1,000 Kernel Wt (grams):	<u>33</u>

30. Physiological/biochemical Traits: Variant plants are taller in height by 8 to 15 cm. Up to 1% taller variant plants may be encountered in subsequent generations.

### Variants and frequency:

3. Syngenta Seeds, LLC. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, LLC. will maintain the variety by the head row/progeny method to produce breeder seed as needed.
7. Certified seed will likely be available in the Spring of 2019
8. Plant Variety Protection is anticipated in 2018 and SY Longmire may only be sold as a class of certified seed.
9. Certified acreage is not to be published by AOSCA and certifying agencies

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 27, 2018





# Wheat

## SY McCloud 10S0059-28 (Exp)

1. SY McCloud is a hard red spring wheat bred and developed by Syngenta Participations AG.
2. SY McCloud was selected for height, straw strength, maturity, foliar diseases, scab, leaf and stem rust.
3. SY McCloud is primarily adapted for the Northern Plains of the USA.
4. SY McCloud is moderately susceptible to Fusarium Head Blight.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Spring Wheat</u>		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	<u>Spring</u>	16. Awn Type:	<u>Awed</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color:	<u>White</u>
4. Juvenile Growth Habit:	<u>Erect</u>	18. Glume Color:	<u>White/Amber</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length:	<u>Medium</u>
6. Flag Leaf at Boot:	<u>Erect, Not Twisted, Wax Absent</u>	20. Shoulder Shape:	<u>Oblique</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width:	<u>Narrow</u>
8. Day(s) to 50% Heading:	<u>57</u>	22. Beak Shape:	<u>Acute</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S,M,L,VL):	<u>Medium</u>
10. Anthocyanin:	<u>Absent</u>	24. Glume Pubescence:	<u>Absent</u>
11. Plant Height (cm):	<u>78</u>	25. Seed Color:	<u>Red</u>
12. Internodes:	<u>Hollow</u>	26. Seed Shape:	<u>Ovate</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks:	<u>Rounded</u>
14. Spike Density:	<u>Middense</u>	28. Brush Size (S,M,L.):	<u>Medium</u>
15. Spike Curvature:	<u>Inclined</u>	29. Avg 1,000 Kernel Wt (grams):	<u>38</u>

### 30. Physiological/biochemical Traits:

#### Variants and frequency:

6. Syngenta Seeds, LLC. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, LLC. will maintain the variety by the head row/progeny method to produce breeder seed as needed.
7. Certified seed will likely be available in the Spring of 2019
8. Plant Variety Protection is anticipated in 2018 and SY McCloud may only be sold as a class of certified seed.
9. Certified acreage is not to be published by AOSCA and certifying agencies

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 27, 2018



# Wheat

## SY Renegade 06PN3017-09 (Exp)

1. SY Renegade is a hard red spring wheat bred and developed by Syngenta Participations AG.
2. SY Renegade was selected for straw strength, maturity, plant height, disease package, yield potential and end use quality..
3. SY Renegade is primarily adapted to Washington, Idaho and Montana.
4. SY Renegade has shown moderate resistance reaction to current stripe rust races and is resistant to Pacific Northwest Hessian fly biotype.
5. Identifying characteristics:

1. Kind:	Common, Hard Red Spring Wheat		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	Spring	16. Awn Type:	Awned
3. Coleoptile Color:	White	17. Awn Color:	White
4. Juvenile Growth Habit:	Erect	18. Glume Color:	White/Amber
5. Leaf Color at Boot:	Green	19. Glume Length:	Medium
6. Flag Leaf at Boot:	Erect, Twisted, Wax Present	20. Shoulder Shape:	Oblique
7. Auricle Color:	White	21. Shoulder Width:	Narrow
8. Day(s) to 50% Heading:	162	22. Beak Shape:	Acuminate
9. Anther Color:	Yellow	23. Beak Length (S,M,L,VL):	Long
10. Anthoncyanin:	Absent	24. Glume Pubescence:	Present
11. Plant Height (cm):	93	25. Seed Color:	Red
12. Internodes:	Hollow	26. Seed Shape:	Ovate
13. Spike Shape:	Tapering	27. Cheeks:	Rounded
14. Spike Density:	Lax	28. Brush Size (S,M,L.):	Medium
15. Spike Curvature:	Inclined	29. Avg 1,000 Kernel Wt (grams):	34

### 30. Physiological/biochemical Traits:

Variants and frequency: Less than 0.1% variant plants were rogued from the Breeder seed increases. The majority of the variant plants were taller height wheat plants (3 to 6 cm). The white seeded variant of approximately 0.01% was identified in the Progeny seed production. Up to 1.0% variant plants may be encountered in subsequent generations, white seed variant up to 35 white seeds per pound.

4. Syngenta Seeds, LLC. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, LLC. will maintain the variety by the head row/progeny method to produce breeder seed as needed.
7. Certified seed will likely be available in the Spring of 2019
8. Plant Variety Protection is anticipated in 2018 and SY Renegade may only be sold as a class of certified seed.
9. Certified acreage is not to be published by AOSCA and certifying agencies

Date this application was submitted: Jul 6, 2018

Date recommended by the VRB: Aug 27, 2018



**Wheat  
Paradise  
AP11T2227 (Exp Des)  
(Amended – Variant Change)**

Variety Name Paradise  
 Experimental Designation(s) AP11T2227  
 Date SGVRB first recommended this variety Apr 20, 2017  
 Date(s) any previous amendments were recommended \_\_\_\_\_  
 Date this amendment was submitted 7/16/2018

1. Paradise is a hard red winter wheat developed by Syngenta Participations AG.
2. Paradise was selected for height, maturity and green leaf duration.
3. Paradise was tested in and is adapted to Central and Southern Plains. Best adapted for dryland production but can be produced under irrigation.
4. Paradise is moderately resistant to stripe rust but moderately susceptible to leaf rust. Tolerance to both SBMV and acid soils. Susceptible to FHB.
5. Identifying characteristics:

1. Kind:	<u>Common, Hard Red Winter Wheat</u>		
	If common, provide appropriate kernel characteristic: (Hard Red, Soft Red, Hard White, Soft White)		
2. Seasonal Growth Habit:	<u>Winter</u>	16. Awn Type:	<u>Awne</u>
3. Coleoptile Color:	<u>White</u>	17. Awn Color:	<u>White</u>
4. Juvenile Growth Habit:	<u>Erect</u>	18. Glume Color:	<u>Tan</u>
5. Leaf Color at Boot:	<u>Green</u>	19. Glume Length:	<u>Long</u>
6. Flag Leaf at Boot:	<u>Recurved, Twisted, Wax Absent</u>	20. Shoulder Shape:	<u>Oblique</u>
7. Auricle Color:	<u>White</u>	21. Shoulder Width:	<u>Medium</u>
8. Day(s) to 50% Heading:	<u>123</u>	22. Beak Shape:	<u>Acute</u>
9. Anther Color:	<u>Yellow</u>	23. Beak Length (S.M.L.VL):	<u>Medium</u>
10. Anthoncyanin:	<u>Absent</u>	24. Glume Pubescence:	<u>Present</u>
11. Plant Height (cm):	<u>84</u>	25. Seed Color:	<u>Red</u>
12. Internodes:	<u>Hollow</u>	26. Seed Shape:	<u>Ovate</u>
13. Spike Shape:	<u>Tapering</u>	27. Cheeks:	<u>Rounded</u>
14. Spike Density:	<u>Lax</u>	28. Brush Size (S,M,L.):	<u>Medium</u>
15. Spike Curvature:	<u>Inclined</u>	29. Avg 1,000 Kernel Wt (g):	<u>36</u>

30. Physiological/biochemical Traits:

Variants and frequency: Approximately 0.8% of the plants were rogued from the Breeder's seed increase in 2015. Approximately 99% of the rogued variant plants were taller height wheat plants (8 to 15 cm). Up to 1.0% variant plants may be encountered in subsequent generations. We also would expect to see up to 1.8% white seed variant.

6. Syngenta Seeds, Inc. maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, Inc. will maintain the variety by the head row/progeny method to produce breeder seed as needed. Royalty fees are anticipated.
7. Certified seed will likely be available Fall of 2017
8. Plant Variety Protection is anticipated in 2017.
9. Certified acreage is not to be published by AOSCA and certifying agencies.

Date this application was submitted: Jul 16, 2018

Date recommended by the VRB: Aug 7, 2018



# Barley

## AKF-BRAVADO P15Y8021 (Exp)

1. AKF-BRAVADO is a 2-row spring hay barley developed by Phoenix Seed, Inc.
2. AKF-BRAVADO was developed using the pedigree method with selection for hood type, fertility, straw strength, height, tillering, and forage quality.
3. AKF-BRAVADO has been tested in Woodland, CA and Casselton, ND and is adapted to the Northern Great Plains as a forage barley.
4. AKF-BRAVADO has not been tested for disease reactions.
5. Identifying characteristics:

1. Growth Habit:	<u>Spring</u>	16. Plant Height (see below):	<u>92.3 cm</u>
2. Spike:	<u>2 Row</u>	17. Spike Shape:	<u>Oblong</u>
3. Coleoptile Color:	<u>Green</u>	18. Spike Density:	<u>Mid-dense</u>
4. Juvenile Growth Habit:	<u>Erect</u>	19. Spike Position at Maturity:	<u>Erect</u>
5. Plant Tillering:	<u>High</u>	20. Hairiness of Rachis Edge:	<u>Covered</u>
6. Leaf Color at Boot:	<u>Green</u>	21. Rachilla Hair Length:	<u>Long</u>
7. Flag Leaf at Boot:	<u>Erect, Twisted, Waxy</u>	22. Lemma Awns:	<u>Sessile Hoods</u>
8. Pubescence on Leaf Blade:	<u>No</u>	23. Length of Lemma Awns:	<u>Short</u>
9. Pubescence on Leaf Sheath:	<u>No</u>	24. Lemma Awn Surface:	<u>Smooth</u>
10. Auricle Color:	<u>White</u>	25. Glume Hairiness:	<u>Covered</u>
11. Heading Date (see below):	<u>179 Julian</u>	26. Glume Awn Surface:	<u>Semi-smooth</u>
12. Stem Color:	<u>White</u>	27. Glume/Lemma Adherence:	<u>Covered</u>
13. Neck Shape:	<u>Straight</u>	28. Texture (if covered):	<u>Semi-wrinkled</u>
14. Collar Shape:	<u>Closed</u>	29. Aleurone Color:	<u>Colorless</u>
15. Spike Exsertion:	<u>Slight</u>	30. Avg 1,000 Kernel Wt (grams):	<u>49</u>

Heading date: 179 Julian which is: SAME AS Day(s) (EARLIER) (LATER) than: STOCKFORD

Plant height: 92.3 cm, which is 3.9 cm (SHORTER) (TALLER) (SAME AS) STOCKFORD

Physiological or biochemical traits: AKF-BRAVADO has deficient laterals.

Variants and their frequency: AKF-BRAVADO may contain up to 0.25% of any of the following variants in subsequent generations: 6-rows, medium talls, non-deficient laterals, non-hooded awns or any combination.

6. Recognized classes are breeder, foundation, registered, and certified seed. Phoenix Seed, Inc. will maintain its purity by the head-row method to produce breeder seed as needed.
7. Certified seed may be available in summer of 2019.
8. Application for PVP is anticipated for AKF-BRAVADO. Title V option will likely not be taken.
9. Certified seed production acreage is not to be published by AOSCA and certifying agencies.

Date this application was submitted: Jul 5, 2018

Date recommended by the VRB: Aug 21, 2018

