

A REPORT OF THE
NATIONAL SMALL GRAIN VARIETY REVIEW BOARD



ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES

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July 2013

The Association of Official Seed Certifying Agencies (AOSCA), National Small Grain Variety Review Board (NSGVRB), reviewed the following varieties on July 24, 2013. 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 Small Grain Variety Review Board by the applicants. The National Small Grain Variety Review Board makes judgments regarding recommendation of varieties for inclusion into certification based on the data supplied. Beyond that, the National 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 National 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

Respectfully submitted,

Abed Anouti, Chairman
National Small Grains Variety Review Board

2013 AOSCA SMALL GRAIN VARIETY REVIEW BOARD

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LCS Iguacu (LNR10-0551)

1. LCS Iguacu is a hard red spring wheat marketed by Limagrain Cereal Seeds. It was tested under the experimental number LNR10-0551.
2. LCS Iguacu was selected for grain yield, agronomic type, reaction to main diseases, and characteristics desirable to the wheat industry in Brazil, using a pedigree head to row breeding method. Following its development, it was tested for these same characteristics in North Dakota and surrounding states.
3. LCS Iguacu is adapted to the hard red spring wheat growing regions of North Dakota. The primary purpose of the variety will be for milling and baking of breads using processed and whole wheat flour.
4. LCS Iguacu is moderately resistant to prevalent races of leaf rust in North Dakota.
5. Identifying characteristics – insert the descriptive term from the Objective Description except where indicated:

1. Kind:	Common	2. Seasonal Growth Habit:	Spring
3. Coleoptile Color:	White	4. Juvenile Growth Habit:	Semi-erect
5. Leaf Color at Boot:	Yellow-Green to Green	6. Flag Leaf at Boot:	Erect, not twisted, wax present
7. Auricle Color:	White	8. Days to 50% Heading:	57
9. Anther Color:	Yellow	10. Stem Color:	Absent
11. Plant Height (cm):	79	12. Internodes:	Hollow
13. Spike Shape:	Oblong	14. Spike Density:	Mid-dense
15. Spike Curvature:	Inclined	16. Awn Type:	Awned
17. Awn Color:	White	18. Glume Color:	White/Amber
19. Glume Length:	Long	20. Shoulder Shape:	Elevated
21. Shoulder Width:	Medium	22. Beak Shape:	Acuminate
23. Beak Length (S,M,L,VL):	S	24. Glume Pubescence:	Absent
25. Seed Color:	Red	26. Seed Shape:	Ovate
27. Cheeks:	Rounded	28. Brush Size (S,M,L):	Short
29. Avg 1,000 Kernel Wt (g):	29.5g		

Physiological/biochemical Traits: none at this time

Variants and frequency: LCS Iguacu may contain up to 0.8% taller plants up to 8” above canopy height.

6. Recognized seed classes will be Breeder, Foundation, Registered, and Certified. Registered and Certified seed of LCS Iguacu may be produced and sold only through a license agreement with LCS. LCS will maintain Breeder and Foundation seed by head-rowing and/or roguing and removal of off-types in bulk seedings as necessary.
7. Registered seed will likely be available for planting in Spring 2014.
8. This variety is marketed under the name TBIO Iguacu in Brazil; LCS plans to apply for Plant Variety Protection with the Title V option under the name LCS Iguacu in 2014.
9. Certified seed production and acreage may be published by AOSCA and official state seed certifying agencies.



LCS News (G09534)

1. LCS News is a soft red winter wheat variety developed by Genesis Seed Research, which was purchased by Limagrain Cereal Seeds, LLC in 2010. LCS News was tested as experimental number G09534 in the Uniform Eastern Soft Red Winter Wheat Nursery.
2. LCS News was selected for yield, and resistance to prevalent races of Leaf Rust, Yellow Rust, and Fusarium Head Blight in Northern Indiana.
3. LCS News is adapted to Northern Indiana. LCS News was widely tested in the Uniform Eastern Soft Red Winter Wheat Nursery in 2012 and we expect its known area of adaptation to expand as the variety is utilized. Flour from LCS News will be used for cakes and pastries.
4. LCS News is resistant to Stripe Rust (yellow rust).
5. Identifying characteristics – insert the descriptive term from the Objective Description except where indicated:

1. Kind:	Common	2. Seasonal Growth Habit:	Winter
3. Coleoptile Color:	White	4. Juvenile Growth Habit:	Semi-erect
5. Leaf Color at Boot:	Yellow-green	6. Flag Leaf at Boot:	Recurved, twisted, wax present
7. Auricle Color:	White	8. Days to 50% Heading:	117.2
9. Anther Color:	Yellow	10. Stem Color:	Present
11. Plant Height (cm):	84	12. Internodes:	Hollow
13. Spike Shape:	Tapering	14. Spike Density:	Mid-dense
15. Spike Curvature:	Erect	16. Awn Type:	Awnletted
17. Awn Color:	White	18. Glume Color:	White/amber
19. Glume Length:	Medium	20. Shoulder Shape:	Oblique
21. Shoulder Width:	Medium	22. Beak Shape:	Acute
23. Beak Length (S.M.L.VL):	Medium	24. Glume Pubescence:	Absent
25. Seed Color:	Red	26. Seed Shape:	Oval
27. Cheeks:	Rounded	28. Brush Size (S,M,L.):	Small
29. Avg 1,000 Kernel Wt (g):	41.3		

Physiological/biochemical Traits: None

Variants and frequency: LCS News has a variable canopy height and may contain up to 1.0% taller plants, up to 8 inches above canopy height.

6. Recognized seed classes will be Breeder, Foundation, Registered, and Certified. Registered and Certified seed of LCS News may be produced and sold only through a license agreement with LCS. Limagrain Cereal Seeds will maintain Breeder and Foundation seed by roguing and removal of off-types in bulk seedings.
7. We anticipate Registered and Certified seed will be available for planting in the Fall of 2014.
8. Plant Variety Protection will be applied for with the Title V option in 2014.
9. Certified seed production and acreage may be published by AOSCA and official state seed certifying agencies.



MS-Stingray (LNR10-0557)

1. MS-Stingray is a hard red spring wheat developed by Biotrigo Genetica LTDA from Brazil. Limagrain Cereal Seeds, LLC has exclusive right to commercialize this variety in North America and may do so through a sub-licensee.
2. MS-Stingray was selected for grain yield, agronomic type, and reaction to main diseases in Brazil, using a pedigreed head to row breeding method. Following its development, it was tested for these same characteristics in North Dakota and surrounding states.
3. MS-Stingray is adapted to the hard red spring wheat growing regions of North Dakota. The primary purpose of the variety will be for milling and baking of breads using processed and whole wheat flour.
4. MS-Stingray is moderately resistant to prevalent races of Leaf Rust in North Dakota.
5. Identifying characteristics – insert the descriptive term from the Objective Description except where indicated:

1. Kind:	Common	2. Seasonal growth habit:	Spring
3. Coleoptile color:	White	4. Juvenile growth habit:	Semi-erect
5. Leaf color at boot:	Yellow-Green to Green	6. Flag leaf at boot:	Erect, not twisted, wax absent
7. Auricle color:	White	8. Days to 50% heading:	57
9. Anther color:	Yellow	10. Stem color:	Absent
11. Plant height (cm):	80	12. Internodes:	Hollow
13. Spike shape:	Oblong	14. Spike density:	Mid-dense
15. Spike curvature:	Erect	16. Awn type:	Awned
17. Awn color:	White	18. Glume color:	White/Amber
19. Glume length:	Long	20. Shoulder shape:	Elevated
21. Shoulder width:	Medium	22. Beak shape:	Acuminate
23. Beak length (S, M, L, VL):	VL	24. Glume pubescence:	Absent
25. Seed color:	Red	26. Seed shape:	Oval
27. Cheeks:	Rounded	28. Brush size (S,M, L):	Long
29. Avg 1,000 kernel wt (g):	25.7	30. Phenol reaction:	Black

Physiological/biochemical traits: None at this time

Variants and frequency: MS-Stingray may contain up to 0.8% taller plants up to 8” above canopy height.

6. Recognized seed classes will be Breeder, Foundation, Registered, and Certified. Limagrain Cereal Seeds will maintain Breeder seedstocks; sub-licensee will be authorized to maintain Foundation seed and to control production of Registered and Certified classes of seed.
7. Registered seed will likely be available for planting in Spring 2014.
8. Decisions regarding Plant Variety Protection are under discussion at time of this application.
9. Certified seed production acreage is not to be published by AOSCA and certifying agencies.



(LNR10-0176)

1. LNR10-0176 is a hard red spring wheat developed by Limagrain Cereal Seeds, LLC.
2. LNR10-0176 was developed by selecting for agronomic plant type, resistance to prevalent foliar diseases, and head scab mainly in Minnesota, with winter nursery selections made in Yuma, AZ.
3. LLNR10-0176 is adapted to the hard red spring wheat growing regions of North Dakota. The primary purpose of the variety will be for milling and baking of breads using processed and whole wheat flour.
4. LNR10-0176 is moderately resistant to prevalent races of Leaf Rust in North Dakota.
5. Identifying characteristics – insert the descriptive term from the Objective Description except where indicated:

1. Kind:	<u>Common</u>	2. Seasonal Growth Habit:	<u>Spring</u>
3. Coleoptile Color:	<u>White</u>	4. Juvenile Growth Habit:	<u>Semi-erect</u>
5. Leaf Color at Boot:	<u>Green</u>	6. Flag Leaf at Boot:	<u>Erect, not twisted, wax present</u>
7. Auricle Color:	<u>White</u>	8. Days to 50% Heading:	<u>56</u>
9. Anther Color:	<u>Yellow</u>	10. Stem Color:	<u>Absent</u>
11. Plant Height (cm):	<u>81</u>	12. Internodes:	<u>Hollow</u>
13. Spike Shape:	<u>Tapering</u>	14. Spike Density:	<u>Mid-dense</u>
15. Spike Curvature:	<u>Inclined</u>	16. Awn Type:	<u>Awed</u>
17. Awn Color:	<u>White</u>	18. Glume Color:	<u>White/amber</u>
19. Glume Length:	<u>Long</u>	20. Shoulder Shape:	<u>Rounded</u>
21. Shoulder Width:	<u>Medium</u>	22. Beak Shape:	<u>Acuminate</u>
23. Beak Length (S.M.L.VL):	<u>VL</u>	24. Glume Pubescence:	<u>Absent</u>
25. Seed Color:	<u>Red</u>	26. Seed Shape:	<u>Elliptical</u>
27. Cheeks:	<u>Angular</u>	28. Brush Size (S,M,L.):	<u>Short</u>
29. Avg 1,000 Kernel Wt (g):	<u>30.1g</u>		

Physiological/biochemical Traits: None at this time

Variants and frequency: LNR10-0176 may contain up to 0.8% taller plants, up to 8 inches taller than canopy height.

6. Recognized seed classes will be Breeder, Foundation, Registered, and Certified. Limagrain Cereal Seeds will maintain Breeder seedstocks; the variety may be sub-licensed and if so, sub-licensee will be authorized to maintain Foundation seed and to control production of Registered and Certified classes of seed.
7. Registered seed will likely be available for planting in Spring 2014.
8. Decisions regarding Plant Variety Protection are under discussion at time of this application.
9. Certified seed production acreage is not to be published by AOSCA and certifying agencies.



Albany (06MSP 18)

Variety Albany, experimental 06MSP 18, is a hard red spring wheat developed by Trigen Seed LLC. It is a selection from a cross Alsen//Buck 1021/Norm we made in the summer of 2001. We grew the F₂ to F₆ generations as bulk populations alternating with nurseries in Minnesota, Arizona, Minnesota, New Zealand, and Minnesota, respectively. Seeds for planting from these bulk populations were subjected to an air column separation process to remove light weight seeds. We selected heads in Minnesota in the F₆ population (F₇ seed) from the more attractive plants in the population. We planted these as individual head-rows in New Zealand and harvested the uniform rows. From here, the individual head-rows entered into a performance trial in Minnesota in the spring of 2005. We advanced the best of these lines for promotion to further performance testing. In 2006 we chose the line that has become Albany for further evaluation. We subsequently grew a small increase of this line in the Imperial Valley, California to provide seed for a breeder seed production at Foxhome, Minnesota in 2007. Albany was entered as line 06MSP 18 in the 2007 Hard Red Spring Wheat Uniform Regional Performance Nursery.

The primary area of adaptation will be the Northern Plains where its purpose will be for breadstuffs.

Albany resembles Freyr but heads about 4 days later than Freyr. Albany is about 5 cm shorter than Freyr, but has about the same straw strength. Albany has a white coleoptile color, an erect seedling growth, a green leaf color at boot, (Royal Horticultural Society 137A), and a recurved flag leaf with a waxy bloom. Auricle color is white. Stem color is white. Stem internodes are hollow. Anther color is yellow. Spikes of Albany are awned, tapering, mid-dense and nodding at maturity. Awns are white. Glumes are light tan. Variants that may occur include taller plants at a rate of up to 0.1%.

Albany is susceptible to stripe rust in the Pacific Northwest. It is postulated to have gene Lr24 for leaf rust resistance. Leaf rust field notes in 2007 were 5MR-MS at Morris, MN and 10MR-MS at Crookston, MN. Albany is moderately resistant to Fusarium Head Blight (*Fusarium graminearum* Schwabe) with low levels of DON.

Seedstock will be maintained by a conventional head-row procedure. Classes to be recognized are breeder, foundation, registered, and certified. Breeder seed will likely be sold in 2008 for the production of Foundation class seed. Application will be made for protection under the Plant Variety Protection Act with the "Certification Option" elected. Acreages are to be published by AOSCA certifying agencies.

