Barley

AAC Synergy

1. AAC Synergy (TR09208) is a two-row spring hulling barley developed by Agriculture and Agri-Food Canada, Brandon, Manitoba, and marketed by Syngenta Seeds USA.

2. AAC Synergy was developed by a modified bulk method with individual spikes harvested from the F₃ increase bulk plots, and grown as single F₄ hill plots in an irrigated field leaf disease nursery. Early selection was based on agronomic appearance and foliar leaf disease resistance. Lines were further selected based on agronomic characteristics, disease reaction, hull peeling, spouting resistance and malt quality analysis.

3. AAC Synergy was tested at and found to be adapted to multiple Spring Barley growing locations on the Canadian prairies including in Manitoba, Saskatchewan, and Alberta. AAC Synergy will be adapted to production areas suited to AC Metcalfe, and has a desirable malting quality profile.

4. AAC Synergy is resistant to spot-form net blotch; moderately resistant to net-form net blotch and spot blotch; moderately resistant to moderately susceptible to common root rot, covered smut, false loose smut, and stem rust (carries the Rpg1 gene); moderately susceptible to FHB; and susceptible to scald, loose smut and speckled leaf blotch (Septoria passerinii Sacc.).

5. Identifying characteristics – insert the descriptive term from the Objective Description (pages 3-5) except where indicated:

1. Growth Habit: Spring
2. Spike: Two-row
3. Coleoptile Color: White/Green Tip Stripe
4. Juvenile Growth Habit: Erect to Semi-Erect
5. Plant Tillerings: Intermediate
6. Leaf Color at Boot: Green
7. Flag Leaf at Boot: Erect With Low Frequency, Recurved, Waxy, Not Twisted
8. Pubescence on Leaf Blade: No
9. Pubescence on Leaf Sheath: No
10. Auricle Color: Purplish
11. Heading Date (see below): 59.8
12. Stem Color: Medium green
13. Neck Shape: Straight-Slight Curve
14. Collar Shape: Half Closed and Half Open Collar Shape
15. Spike Exertion: Slight
16. Plant Height (see below): 74.6
17. Spike Shape: Strap
18. Spike Density: Mid-Dense
19. Spike Position at Maturity: Erect to Semi-Erect
20. Hairiness of Rachis Edge: Covered
21. Rachilla Hair Length: Long
22. Lemma Awns: Straight
23. Length of Lemma Awns: Long
24. Lemma Awn Surface: Rough
25. Glume Hairiness: Banded
26. Glume Awn Surface: Rough
27. Glume/Lemma Adherence: Covered
28. Texture (if covered): Slightly wrinkled
29. Aleurone Color: Colorless
30. Avg 1,000 Kernel Wt (g): 47.2

Heading date: 59.8 which is: 1.2 days EARLIER than: CDC Copeland

Plant height: 74.6 cm, which is: 1.4 cm SHORTER than AC Metcalfe

Physiological or biochemical traits:

(continued on next page)
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Variants and their frequency: No variants were identified when the Breeder Seed of AAC Synergy was developed. When the Breeder Seed plot was rogued, 10 tall plants (off-types) were removed this is the equivalent of 1.0 per 20,000 plants. Also rogued was 1 awnless off-type plant equivalent to 0.1 in 20,000 plants. Frequency of off-types was very low and not a purity concern.

6. Syngenta Seeds, Inc. or AAC maintains seed stock and certified classes of Foundation, Registered and Certified. Syngenta Seeds, Inc. will maintain the variety by the head row method to produce breeder seed as needed. Royalty fees are anticipated.

7. Certified seed will likely be available for commercial malt test production in 2015.

8. Plant Variety Protection is anticipated in 2015 and AAC Synergy 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: Jan 09, 2015
Date recommended by the VRB: May 04, 2015