

# HAW Great Is This Wheat!

With consumers searching for healthier food more than ever, Arista has researched and developed High Amylose Wheat (HAW), a breakthrough innovation that boosts health benefits in wheat and is now starting to be available.

By Catalina Mihi

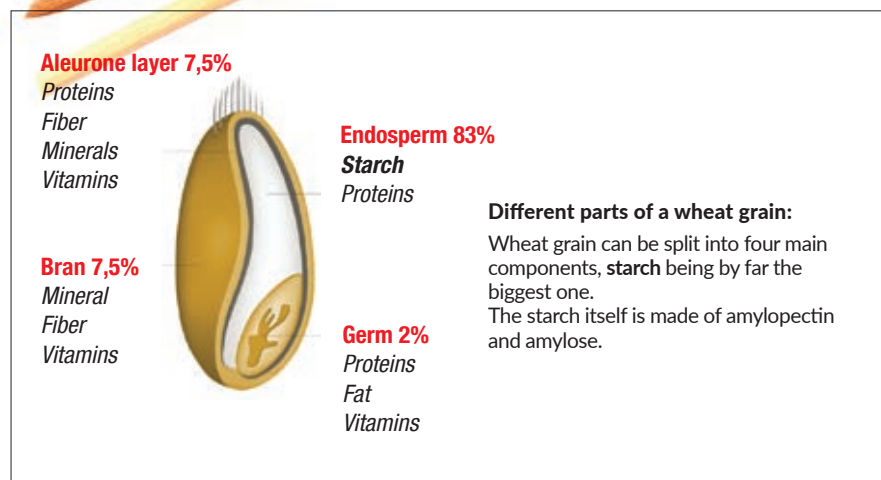
The essential value of the HAW flour is that it brings a natural and very high content of fermentable fiber, called Resistant Starch (RS), which has a strong positive impact on blood glycemic load and human microbiota. Resistant Starch is very useful for health benefits as it cumulates glycemic impact and prebiotic effect. Furthermore, in the case of HAW, it's a native resistant starch, not extracted or synthesized, containing "Fiber from the farm, not from the factory", as the specialists refer to it.

Its health benefits stem from the high content of fiber that has a very good intestinal tolerance; it is a fermentable fiber, which means it has a prebiotic effect, and positively influences the gut health microbiota. Moreover, the HAW is a great solution for people with diabetes, as it releases lower levels of glucose in the blood, which in turn triggers a lower insulin response, Eric Vaschalde explained for us on behalf of Arista. HAW also ensures great energy management, as it provides a high fiber content and, at the same time, a lower rapid sugar content.

## REAPING THE BENEFITS

With 10 times more fiber than regular breeds, HAW is essentially a wheat variety, in that it has no special cultivation requirements. The breeding to obtain this type of wheat has been aimed at the consumer directly, unlike wheat varieties that are favored for the benefits they bring to the growers (i.e., disease resistance, drought tolerance) or to the industrial manufacturers (for example, selections with a higher gluten content). HAW's yield is somewhat lower than the average since it has been developed for its amylose content and not specifically targeting high yield, which could pose a

hurdle in its market entry. However, it is worth mentioning that "It is a brand new type of wheat, which will bring very interesting opportunities to the food industry and health benefits to consumers. But we are just at the beginning of the story," Vaschalde anticipates.



The flour obtained from HAW can be used freely, as you would any other flour, without any special requirements. One recipe adaptation should be kept in mind: HAW flour attracts more water and will require more hydration, to mix it into a good dough. It is convenient for all wheat-based recipes, which makes for endless possibilities to bake with benefits, anything from bread to noodles, biscuits, or tortilla, with no impact on taste or flavor. Refined HAW flour has about 10 times more fibers than standard refined flour (AOAC 2011-25), the specialist said, adding that, "According to the recipe, we



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*Eric Vaschalde,  
marketing,  
Arista Cereal  
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at first, and then potentially expand to Asia. The innovative wheat is expected to be available on European markets in approximately three years.

Arista's research project that led to the development of HAW spans over 20 years. Arista is a privately held, joint venture company formed by Limagrain, a 50-year-old farmer-founded and directed, a world player in wheat seeds, and CSIRO, Australia's National Research Agency, a globally recognized organization focused on using science to make a positive difference in the world for nearly one hundred years. The companies began collaborating on fundamental research in wheat starch 20 years ago and joined their efforts and expertise in 2006 (when Arista Cereal Technologies was created as a joint venture) to develop and commercialize HAW, the High Amylose Wheat with direct consumer health benefits. "Both CSIRO and Limagrain Ingredients worked on research and joined efforts. Then CSIRO implemented patents for Arista all over the world, while Limagrain has been more invested in breeding HAW varieties. Therefore, beyond common research on HAW, the two companies have complementary know-how," Arista's representative outlined the project. •

advised manufacturers to measure the amount of fiber in the final product, since some fiber may be lost during baking." For instance, a white bread made with a blend of 40% standard flour and 60% HAW flour will have over three times more fiber than a standard white bread, with no change in texture.

#### **GROWING HAW**

The newly-developed wheat is currently grown in the USA – in Washington, Minnesota, and Arizona; it has been produced for two years and has just been launched for sale on the American market. The production also commences in Australia – to supply Australia and Japan

## **ARISTA CEREAL TECHNOLOGIES AT A GLANCE**

### **CSIRO**

As Australia's national science agency, CSIRO researches innovation in science and technology. CSIRO Agriculture and Food takes an integrated 'gene to plate' approach to improve crop quality and yield, develop innovative food processing technologies, create new value-added foods, and grow our livestock, aquaculture and fishery industries.

### **Limagrain**

The fourth-largest seed company worldwide, Limagrain is an international agricultural cooperative group founded and managed by French farmers. As a creator and producer of plant varieties, Limagrain distributes field seeds, vegetable seeds, and cereal products.