

Making the connection

BY BERNARD TOBIN

Baking white whole-wheat bread is about to get easier thanks to Gavin Humphreys. He's a Winnipeg, Man.-based wheat breeder and the developer of Whitehawk, a new hard white spring wheat that promises to deliver what bread makers need to meet growing demand for the white whole-wheat category — stronger dough and better baking performance.

It's just one example of potential baking solutions and opportunities emerging from the plant-breeding pipeline that are taking root in farmers' fields across the country. It also illustrates what happens when the entire value chain — from farmer to food manufacturer — works together to find answers to ingredient and product development needs.

Whitehawk improves on two existing hard white wheat varieties used to supply baking companies with the majority of white whole-wheat flour. "It has high protein content, but the real advantage is dough strength needed to carry the extra elements such as bran in a whole-wheat product," says Humphreys, who works for Agriculture and Agri-Food Canada.

"We think it's a game changer. It really puts it all together in terms of gluten strength, protein and white kernel type," says Todd Hyra, Western Canada business manager for the SeCan seed company, which is partnering with Richardson International to bring certified seed of the new variety to farmers' fields this spring and end-use markets in the fall.

It's through Canada's seed certification system and the use of certified seed that those plant breeder achievements can be delivered to an end-user. Humphreys says Whitehawk is a good example of wheat breeders understanding what bakers and millers need in a wheat variety and then working to incorporate those traits. In this case, it took 10 years to develop the variety from first genetic cross to commercialization.

End-user requirements drive breeding opportunities

Establishing the Canada Western Hard White Spring wheat class, which includes Whitehawk, is an example of a large-scale industry response to meet the growing appetite for white whole-wheat products. Researchers and seed companies are also responding to niche market opportunities such as the demand for locally produced food.

Durum wheat is used to make pasta and is predominantly grown in Western Canada where less disease pressure makes it easier for farmers to grow. But C&M Seeds of

Baking solutions and opportunities emerging from the plant-breeding pipeline are better meeting the needs of bake and snack food producers



Palmerston, Ont., has developed a durum wheat variety that could be the foundation of made-in-Ontario pasta.

C&M general manager Archie Wilson explains that the new variety — called Hallmark — grows well in Ontario, delivers the same functionality as western durum, and also has several unique characteristics. “It’s a nuttier flavour and stays al dente and firmer longer, which people like,” explains Wilson, who is currently working on a business model for Hallmark. It could be grown in Ontario this summer.

“To put it in a nutshell, we are trying to find genetics that would fit certain market opportunities and not just develop varieties for the broad stream,” says Wilson. “It is important for companies like C&M to know what millers and bakers need and want in their wheat,” he adds, noting that the company plants 7,000 variety test plots annually.



Photo courtesy of the Canadian Seed Growers' Association

Certified seed makes cereal innovation possible

“Through Canada’s certified seed program, a portion of the seed sales is reinvested in plant breeding and innovation to make the next Whitehawk or Hallmark possible,” explains Dale Adolphe, executive director of the Canadian Seed Growers’ Association. “Certified seed provides a production process that helps assure identity and purity is maintained through the commercialization of a new variety. It encourages and supports the research we need to help the food industry achieve the nutrition, appearance and processing attributes that end users and customers are seeking.”

For Wilson, good communication throughout the value chain is key to ensuring the right varieties are emerging from the research pipeline and being brought to market. He says a new C&M variety, CM249, is a good example of this collaboration. “We offered farmers a premium to grow that variety because it delivers something to a specific end-user. It’s a soft red wheat with a stronger gluten profile that provides improved functionality in the cracker industry.”

Delivering specific varieties that meet baking needs

The Ontario grain handling system has the ability to segregate and protect the identity of specific varieties and the unique qualities they can provide for end-users. That’s very important for niche markets, explains Crosby Devitt, Research and Market Development manager for the Grain Farmers of Ontario (GFO).

It’s also critical for ensuring millers and bakers have access to specific wheat varieties. “One of our goals is to give bakers, who make products with more defined characteristics, access to specific varieties that meet their needs,” explains Devitt. With certified seed and the industry’s identity preserved system, specific varieties can be sourced and delivered to a miller who produces the flour for the baker. He adds that the GFO is currently working with Kraft to identify specific varieties that could be used in this manner.

OPPORTUNITY KNOCKS WITH END OF CANADIAN WHEAT BOARD

Will the end of the Canadian Wheat Board (CWB) be a boon or bust for developing new and innovative wheat varieties?

Todd Hyra, sales manager for Kanata, Ont.-based SeCan, the seed company marketing the new Whitehawk wheat variety, believes the end of the CWB has its pros and cons.

“The wheat board developed markets for the industry’s overall benefit — those won’t be there any more,” says Hyra. But the good news is stakeholders — breeders, seed companies, grain companies, millers and baking companies — can now build direct relationships with no filters. “The response will be quicker and you can make or break a program more quickly,” he adds.

Palmerston, Ont.-based C&M Seeds’ general manager Archie Wilson says the end of single desk selling for wheat in Ontario more than 10 years ago has been very positive for the provincial industry. He sees the same thing happening in the West. “Once we went away from single desk selling, we had much better communication with people in the value chain, and because of that we can look at more unique solutions.”