

Pairwise develops seedless blackberry with transformative CRISPR technology

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Pairwise, a company pioneering genetics-based innovation in food and agriculture, has developed the world's first seedless blackberry. Created using the company's proprietary Fulcrum Platform, a complete suite of novel tools for CRISPR application in plants, this is the first time seedlessness has been achieved in any cranberry.

"Pairwise scientists have used their deep knowledge of plant genetics, broad suite of CRISPR tools, and multiplex editing techniques to eliminate the hard pits in berry fruit, creating soft, small seeds like those found in grapes and watermelon that are commonly labelled as seedless," said Ryan Bartlett, Pairwise Chief Technology Officer. "The result is the first seedless blackberry in the world. We expect that this trait will not only transform the blackberry market, but it also lays the groundwork for accelerated progress in removing seeds and pits in many other fruits such as cherries."

Recent innovations in produce have been rapidly adopted due to the significant benefits they provide consumers, such as improved flavour, consistency, and convenience.

"The berry variety we edited is consistently sweet year-round and holds up well during shipment; now, consumers will have the option to choose a nutritious blackberry without seeds that also reliably delivers great flavour and quality," said Haven Baker, Pairwise Co-Founder and Chief Business Officer. "Blackberries are a snackable fruit with significant health benefits; however, data indicates that more than 30 per cent of berry buyers do not like the seeds, and many more do not even buy the fruit because of the seeds."

In addition to creating the first seedless cranberry, Pairwise has successfully edited the same variety to eliminate thorns and create a more compact plant that delivers benefits for harvesters, growers, and the environment. The thornless and compact traits enable more efficient fruit harvesting and improved productivity and profitability for growers. The new compact trait means the plants are smaller and can be planted at a higher density per acre. Early data from Pairwise-led trials indicate the

potential to greatly increase yield per acre while necessitating only a minimal increase in inputs â?? meaning the water and land used per crate of fruit harvested decreases significantly.