

Bayer advances genome-editing initiatives for nutrition enhanced vegetables

03 June 2024 | News

Collaboration with G+FLAS to develop new tomato varieties addresses Vitamin D deficiency affecting a billion people worldwide



Collaboration with G+FLAS to develop new tomato varieties addresses Vitamin D deficiency affecting a billion people worldwide

Bayer has advanced two initiatives with external partners to bring forward genome editing in vegetables. Bayer and South-Korean biotech company G+FLAS have entered into an agreement to collaborate on developing genome-edited tomato varieties that are nutritionally enhanced with vitamin D3. Vitamin D deficiency is a widespread issue globally, particularly in countries where winter sunlight is limited. It affects an estimated billion people worldwide and can lead to a range of health issues including rickets.

Part of the agreement is also the ambition to develop seeds for a broader variety of tomato products using genome editing.

“Bayer is committed to achieving “Health for All, Hunger for None”. As we work toward this mission, we are proud to address a widespread nutrition problem and to support a healthy diet through cutting-edge technology. The collaboration leverages G+FLAS’ genome editing technology and Bayer’s proprietary tomato germplasm,” said JD Rossouw, Head of Vegetables Research & Development at Bayer.

Bayer launches open innovation platform for genome editing in vegetables

The collaborations with G+FLAS and Pairwise are an example of a crucial part of Bayer’s innovation strategy: combining Bayer’s leading Research & Development capabilities with knowledge and ingenuity from experts outside the company. As part of this, Bayer has now started another open innovation platform with a focus on genome editing in fruits and vegetables.

Bayer obtains license to genome edited leafy greens from Pairwise

The importance of Bayer's strategic open innovation approach has already been proven, now most recently through a new licensing agreement with US-based pioneering food and agtech startup Pairwise. Bayer has acquired a license from Pairwise that grants rights to work with and commercialize Pairwise's genome edited mustard greens. These are a mix of colorful leafy greens with a unique, fresh flavor and higher nutrition compared to lettuce, achieved through genome editing. They were the first gene-edited food introduced to the North American market.

"This agreement and its focus on genome-edited produce made a substantial contribution to our open innovation approach. We're excited to partner with Pairwise on their innovative leafy greens, which deliver a new, great-tasting salad option with high nutrition value," said JD Rossouw. "The latest deal creates value beyond just selling a product, as it also comes with rights to use the knowledge, intellectual property, and technology going forward." The license includes commercialization rights for the varieties developed by Pairwise and rights to develop new varieties.