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Beck's, RAGT and Phytoform join forces to develop AI-engineered corn traits for next era of crop productivity

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The partnership will leverage artificial intelligence and advanced gene tuning technologies to create high-yielding corn varieties tailored for major agricultural markets across the Americas and potentially Europe

In a move that underscores the growing role of artificial intelligence in crop innovation, Beck's and RAGT have entered into a strategic collaboration with agricultural biotechnology company Phytoform to develop a new generation of corn trait products using AI-powered gene regulation technology.

The collaboration will initially focus on enhancing whole-plant corn architecture, a key determinant of crop productivity and harvestable yield. The companies aim to develop improved corn varieties for major agricultural markets, including the United States and South America, with future opportunities extending to Europe.

At the center of the partnership is Phytoform's proprietary CRE.AI.TIVE™ platform, an artificial intelligence-driven technology designed to identify and optimize precise modifications within a plant's native regulatory DNA. Rather than inserting foreign genetic material, the platform fine-tunes how existing genes are expressed, enabling scientists to influence when, where, and to what extent specific genes are activated.

The approach offers a highly targeted method for developing both simple and complex crop traits while aligning with evolving regulatory frameworks in certain markets where gene-edited crops are treated similarly to conventionally bred varieties.

The partnership combines Phytoform's expertise in AI-enabled crop development with Beck's extensive market reach and RAGT's global breeding capabilities, proprietary germplasm resources, and deep understanding of corn genetics. Together, the companies are seeking to accelerate the commercialization of differentiated corn products that address the growing need

for higher productivity, improved resilience, and greater input efficiency.

Corn remains one of the world's most economically important crops and continues to face mounting pressure from climate variability, resource constraints, and rising global food demand. Improving plant architecture has emerged as one of the most promising avenues for increasing harvestable yield and optimizing overall crop performance without significantly increasing production inputs.

The collaboration also reflects a broader shift within the agricultural industry toward precision breeding technologies that leverage artificial intelligence and advanced genomics to accelerate crop improvement. By enabling breeders to make highly specific adjustments within elite germplasm, AI-powered gene tuning is increasingly being viewed as a powerful tool for addressing complex agronomic challenges while shortening breeding cycles.

Unlike traditional transgenic technologies, which rely on the introduction of foreign genes, Phytoform's platform works entirely within the plant's own genetic framework, potentially offering a pathway to improved crop varieties that are more closely aligned with changing regulatory requirements and consumer preferences.

Although the initial focus of the collaboration is on corn, Phytoform's CRE.AI.TIVE™ platform is designed to be crop-agnostic, opening the possibility of applying the technology across multiple crop species and addressing a broad range of agricultural challenges in the years ahead.

As artificial intelligence increasingly becomes embedded in agricultural research and development, collaborations such as this one highlight how the convergence of plant science, data science, and advanced breeding technologies is reshaping the future of crop innovation and laying the foundation for more productive and resilient farming systems.