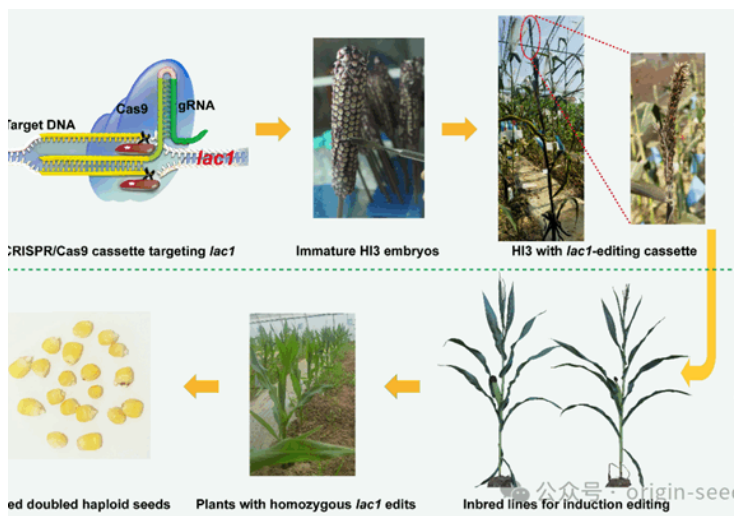


China's Origin Agritech's pioneering Hi3 Gene editing technology boosts crop yields and sustainability

03 December 2025 | News

Establishes the world's first efficient genetic transformation system for the maize induction line Hi3



Establishes the world's first efficient genetic transformation system for the maize induction line Hi3

Origin Agritech Ltd. , a leading Chinese agricultural technology company, announced that its pioneering corn haploid induction line Hi3 gene editing technology has been selected as one of the Top 10 Major Progresses in Chinese Agricultural Science for 2025 by the Chinese Academy of Agricultural Sciences. This prestigious recognition underscores Origin's leadership in agricultural biotechnology and highlights the transformative potential of its research to drive commercial advances in crop yields and sustainability.

The selection process, organized by the Chinese Academy of Agricultural Sciences' Agricultural Information Institute, aims to showcase China's original innovation capabilities in agricultural technology, propagate major scientific achievements, and accelerate high-level technological self-reliance in the sector. Guided by the principles of "frontier-leading, pioneering excellence, and major breakthroughs," the evaluation drew from 46,832 high-level papers published in 2024 by Chinese scholars as first or corresponding authors in Web of Science-indexed agricultural field journals. Through a rigorous process involving bibliometric preliminary selection, peer expert review, and academicians selection, 10 groundbreaking progresses were identified.

Origin's Hi3 technology, developed through its subsidiary Hainan Aoyu Biotech Limited in collaboration with Professor Tian Feng and his fellows at China Agricultural University, represents a landmark achievement in maize gene editing. As detailed in the Company's groundbreaking research article published in the prestigious journal Nature in June 2024, titled "Maize

Smart Canopy Architecture Enhances Yield at High Densities," this innovation establishes the world's first efficient genetic transformation system for the maize induction line Hi3. The system enables rapid, fixed-point editing of major maize inbred lines across diverse genetic backgrounds, overcoming longstanding barriers in traditional breeding. By precisely enhancing traits such as leaf angle to optimize plant architecture, Hi3 can improve maize yield at high densities within a single year—saving 3-4 years compared to conventional backcrossing methods—without the interference of linked genes.

This technology holds substantial commercial promise, with Origin actively advancing its commercialization. China is expediting the issuance of biosafety certificates for gene-edited crops, including corn, soybeans, and wheat. The Company has already developed more than 10 improved maize gene-editing induction lines addressing critical traits, such as reducing upper leaf angles for better light utilization, enhancing drought and lodging resistance, extending growth periods, and stacking multiple composite traits, with the aim of initiating the commercialization of its gene-edited corn varieties in the coming years. Several of Origin's commercial corn hybrids have also been modified using this technique and have demonstrated significant yield increases in 2025 field demonstrations