

Origin Agritech Strengthens Gene Editing Platform through Patent License Agreement with Shunfeng BioTech

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BEIJING, Nov. 10, 2025 /PRNewswire/ -- Origin Agritech Ltd. (NASDAQ: [SEED](#)) (the "Company" or "Origin"), a leading Chinese agricultural technology company, today announced it has entered into a patent license agreement with Shandong Shunfeng Biotechnology Co., Ltd. ("Shunfeng BioTech") for the Cas-SF01 gene editing tool. This collaboration grants Origin long-term access to fully IP-protected gene editing technologies, providing a solid foundation for the Company's future research and development in trait gene editing. It also aims to accelerate the adoption of advanced gene editing technologies in corn breeding, marking a significant milestone in Origin's efforts to develop high-density, high-yield, and adaptable corn varieties.

Advancing Breeding with Gene Editing Technology

The partnership builds upon Origin Agritech's long-term collaboration with China Agricultural University. Together, they identified two key regulatory genes controlling corn leaf angle—**ZmRAVL1** and **ZmDWF4**—whose functional studies have been published in *Science* and *Nature*, respectively.

Using Shunfeng BioTech's proprietary Cas-SF01 gene editing platform, researchers successfully developed a series of edited corn induction lines, including **ZmRAVL1-KO1** and **ZmDWF4-KO1**.

Origin's acquisition of these edited corn induction lines addresses three strategic objectives:

- **Biosafety Compliance:** Essential for completing evaluations required for agricultural gene editing
- **Direct Breeding Resources:** Immediate application in future commercial hybrid development
- **Core Technology Foundation:** Central to Origin's "Smart Plant Architecture" corn breeding program

Technological Breakthrough: "Smart Plant Architecture" for Enhanced Yields

Functional validation demonstrates that ZmRAVL1-KO1 and ZmDWF4-KO1 effectively optimize corn leaf angle, creating a canopy structure characterized by compact upper leaves and open lower leaves. This "smart plant architecture" significantly improves field light interception and airflow, enabling higher planting density and greater yield potential.

"Enhancing corn yield through increased planting density has long been a global breeding goal, but traditional methods have limited progress," said **Mr. Bill Deng, VP and Head of R&D at Origin Agritech**. "These edited induction lines enable precise and efficient improvement of plant architecture in elite germplasm. Combined with our proprietary Hi-3 induction line gene editing technology, we can complete variety upgrades rapidly while avoiding the genetic drag associated with conventional backcrossing."

Commercialization Roadmap: Advancing Biosafety Evaluation

Origin Agritech has initiated the biosafety assessment process for the edited lines. Additionally, this license agreement provides a substantial advantage by facilitating biosafety approval for Origin's current and future gene editing

transformants utilizing Hi-3 one-step gene-editing method, for some of which the Company has already applied. The Company estimates obtaining final biosafety certification will require 1-2 years due to regulatory procedures and experimental timelines. Origin is committed to advancing this process and accelerating the commercialization of its gene editing innovations.

Mr. Deng continued, "The signing of this patent license agreement marks a significant step forward in Origin Agritech's gene editing breeding strategy. By integrating world-class research resources with innovative biotechnological tools, we are building a modern breeding innovation system with proprietary intellectual property, contributing to China's agricultural technology advancement and national food security."

About Origin Agritech Limited

Origin Agritech Limited, founded in 1997 and headquartered at the Origin R&D Center in Songzhuang, Tongzhou, Beijing, is a leading agricultural technology company in China. In crop seed biotechnologies, Origin Agritech's phytase corn was the first transgenic corn to receive the Bio-Safety Certificate from China's Ministry of Agriculture. Over the years, Origin has established a robust biotechnology seed pipeline, including products with glyphosate tolerance and Bt (pest resistance) traits. For further information, please visit the Company's website at www.originagritech.com. The Company also maintains an X account to update investors on company and industry developments, which can be found at https://x.com/origin_agritech.

Forward-Looking Statements

This communication contains "forward-looking statements" as defined in the federal securities laws, including Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended, and as defined in the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements address expected future business and financial performance and financial condition and contain words like "expect," "anticipate," "intend," "plan," "believe," "seek," "will," "would," "target," and similar expressions and variations. Forward-looking statements address matters that are uncertain. Forward-looking statements are not guarantees of future performance and are based on assumptions and expectations that may not be realized. They are based on management's current expectations, assumptions, estimates, and projections regarding the Company and the industry in which it operates, but involve a number of risks and uncertainties, many of which are beyond the Company's control. Some of the important factors that could cause the Company's actual results to differ materially from those discussed in forward-looking statements are: failure to develop and market new products and optimally manage product life cycles; ability to respond to market acceptance, rules, regulations and policies affecting our products; failure to appropriately manage process safety and product stewardship issues; changes in laws and regulations or political conditions; global economic and capital markets conditions, such as inflation, interest and currency exchange rates; business or supply disruptions; natural disasters and weather events and patterns; ability to protect and enforce the Company's intellectual property rights; and separation of underperforming or non-strategic assets or businesses. The Company undertakes no duty or obligation to publicly revise or update any forward-looking statements as a result of future developments, new information, or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws. Although the Company believes that the expectations expressed in these forward-looking statements are reasonable, it cannot assure that such expectations will be correct. Actual results may differ materially from the anticipated results. You are urged to consider these factors carefully in evaluating the forward-looking statements contained herein. You are cautioned not to place undue reliance on such forward-looking statements, which are qualified in their entirety by these cautionary statements.

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