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Pairwise grants Gene Editing Tech to CIMMYT to accelerate smallholder farm innovation

16 June 2025 | News

Pairwise has signed a landmark licensing agreement with CIMMYT, granting access to its Fulcrum gene editing platform and cutting-edge SHARC CRISPR enzyme. The collaboration aims to fast-track the creation of improved crop varieties for smallholder farmers across 20 countries where CIMMYT operates integrated R&D programs.

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In a major step toward transforming agriculture in the Global South, agricultural genetics company Pairwise has licensed its advanced Fulcrumâ?¢ gene editing platform to the International Maize and Wheat Improvement Center (CIMMYT). The agreement grants CIMMYT and its National Agricultural Research System (NARS) partners access to powerful gene editing toolsâ??including the SHARC CRISPR enzymeâ??to accelerate the development of improved, climate-resilient crop varieties for smallholder farmers across more than 20 countries.

CIMMYT, headquartered in Mexico and operating in 88 countries, is a key institution within the CGIAR global research network and a leader in food security and climate resilience. The partnership will enable targeted innovation in staple crops such as maize, wheat, and sorghum, as well as regionally important crops like pearl millet, finger millet, pigeon pea, and groundnut.

â??Advanced breeding techniques replicate what happens in nature in a faster, more focused way,â? said Dr. Sarah Hearne, Chief Science and Innovation Officer at CIMMYT. â??Access to Fulcrumâ??s gene editing technology will help us develop and deliver traits that boost resilience and nutritionâ??tools that smallholder farmers urgently need to improve livelihoods and strengthen food systems.â?•

The Fulcrumâ?¢ Platform includes precision tools for cutting, base editing, and templated editing, allowing scientists not only to activate or silence genes, but also fine-tune themâ??like adjusting a dimmer switchâ??to optimize desired traits and crop performance.

Pairwise Chief Operating Officer Ian Miller noted that the licensing agreement aligns with the companyâ??s mission to make cutting-edge tools available for global agricultural challenges. â??Our Fulcrum Platform was built to help scientists tackle urgent, real-world challenges in agriculture,â?• he said. â??By licensing these tools to CIMMYT, weâ??re enabling real-world solutions for farmers dealing with food insecurity and climate stress.â?•

Gene editing offers the potential to achieve genetic improvements that traditional breeding could reach only over much longer timelines and at higher costs. Through this partnership, such innovations will be brought faster to farmers in regions where they are most needed, with the potential to significantly improve yield, nutrition, and climate resilience.

The collaboration also reflects a growing commitment to ensure that the benefits of biotechnology extend to underserved farming communities, supporting food security and sustainable agricultural development across the Global South.