

China grants GMO Safety Certificate to SSMM-15 Corn Seed Technology

12 October 2026 | News

The SSMM-15 transgenic event has received a production-application safety certificate, with field measurements indicating yield gains of more than 15 per cent over conventional manual detasseling



China has approved its first nuclear male sterility transformation event for corn seed production, marking a step towards mechanising hybrid seed production and reducing reliance on labour-intensive detasseling.

The SSMM-15 transgenic corn line, jointly developed by China Agricultural University and Sichuan Tianneng Jingxiu Biotechnology Co. Ltd., has received an agricultural genetically modified organism (GMO) safety certificate for production application from China's Ministry of Agriculture and Rural Affairs.

Conventional hybrid corn seed production typically involves manually removing tassels from female parent plants to prevent self-pollination. The process requires substantial labour, adds to production costs and can affect seed purity if detasseling is incomplete or inconsistent.

SSMM-15 uses nuclear male sterility technology to eliminate the need for manual detasseling, enabling greater mechanisation of seed production. The approach is intended to improve operational efficiency, lower costs and reduce the risk of human

error in maintaining hybrid seed purity.

Field results indicate higher seed yields

Field measurements conducted on September 22 in a commercial seed production field in Zhangye, Gansu province, reported yield increases of more than 15 per cent per unit area for male-sterile lines compared with hybrid seed production using manual detasseling.

The assessment was led by the National Key Laboratory of Corn Biological Breeding at China Agricultural University, with participation from experts associated with the Gansu Provincial Seed Administration Station, Zhangye City Seed Management Bureau, Lanzhou University, Gansu Academy of Agricultural Sciences and Hexi University, among other institutions.

The results also indicated increases in the number of rows per ear and kernels per row. These findings suggest potential productivity gains, although commercial performance will depend on production conditions and the effectiveness of the technology at scale.

From regulatory approval to commercial application

The safety certificate represents a regulatory milestone in moving SSMM-15 from research towards industrial application. The National Key Laboratory of Corn Biological Breeding at China Agricultural University said it would continue refining the technology and accelerating its development and commercialisation.

The development highlights China's efforts to advance biotechnology-led improvements in crop breeding and seed production. By reducing manual intervention and improving production efficiency, nuclear male sterility technology could help address labour constraints and support large-scale hybrid corn seed production.

The next test will be whether the technology can deliver consistent seed purity, productivity and cost advantages across commercial operations. Its broader adoption will also depend on implementation requirements and the regulatory framework governing genetically modified crops in China.