
Legal framework conditions and New GMOs on the market: Challenges for the European food and feed sector



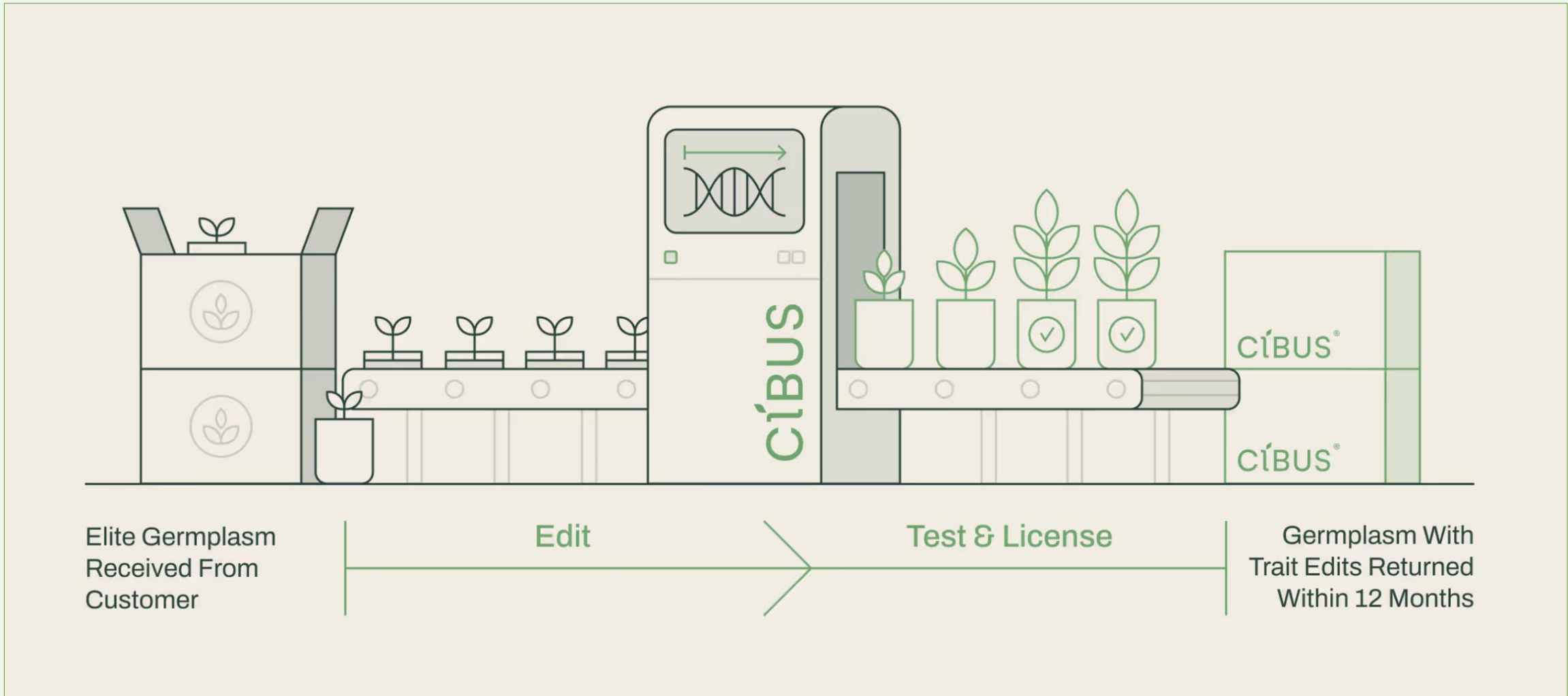
**New GMOs Market Report 2026:
Which crops are present in different
markets and in development pipelines?**

Dr Eva Gelinsky

Freelance scientist, seminar,
Switzerland

New GMOs

- **in Cultivation**
- **in Development**
- **withdrawn from the Market**



Investing in CRISPR for Crops of the Future: What We Heard at World Agri-Tech

✎ Madeleine Baerg - Seed World Executive VP - Operations 📅 March 27, 2024

“It’s probably fair to say we have not seen the kind of big impact, large scale commercialization of gene-edited products in the market. And the venture funding has plateaued in the last few years in gene editing in ag”.

Gusui Wu, Head of Seeds Research at Syngenta, 2024

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Which New GMOs are in cultivation and where?

According to our research, only 4 plants are currently grown commercially worldwide:



Two HR-maize varieties: DP 910521, DP 915635



Sicilian Rouge High GABA

Foods with Function Claims Notification · H617

GABA's Effect	1 tomato	2 tomato	5-7 tomato	5-7 tomato
	Can lower blood pressure of people with high blood pressure	can relieve temporary stress from work/studies	can improve sleep quality (for example, a deeper and more refreshing sleep)	can protect skin health by maintaining skin elasticity

An infographic for "Sicilian Rouge High GABA" tomatoes. It features a green and red background with images of whole and sliced tomatoes. The infographic lists the number of tomatoes required to achieve various health benefits related to GABA. A "GABA's Effect" column lists the benefits, while the other columns specify the quantity of tomatoes needed for each benefit. A notification code "H617" is also present.

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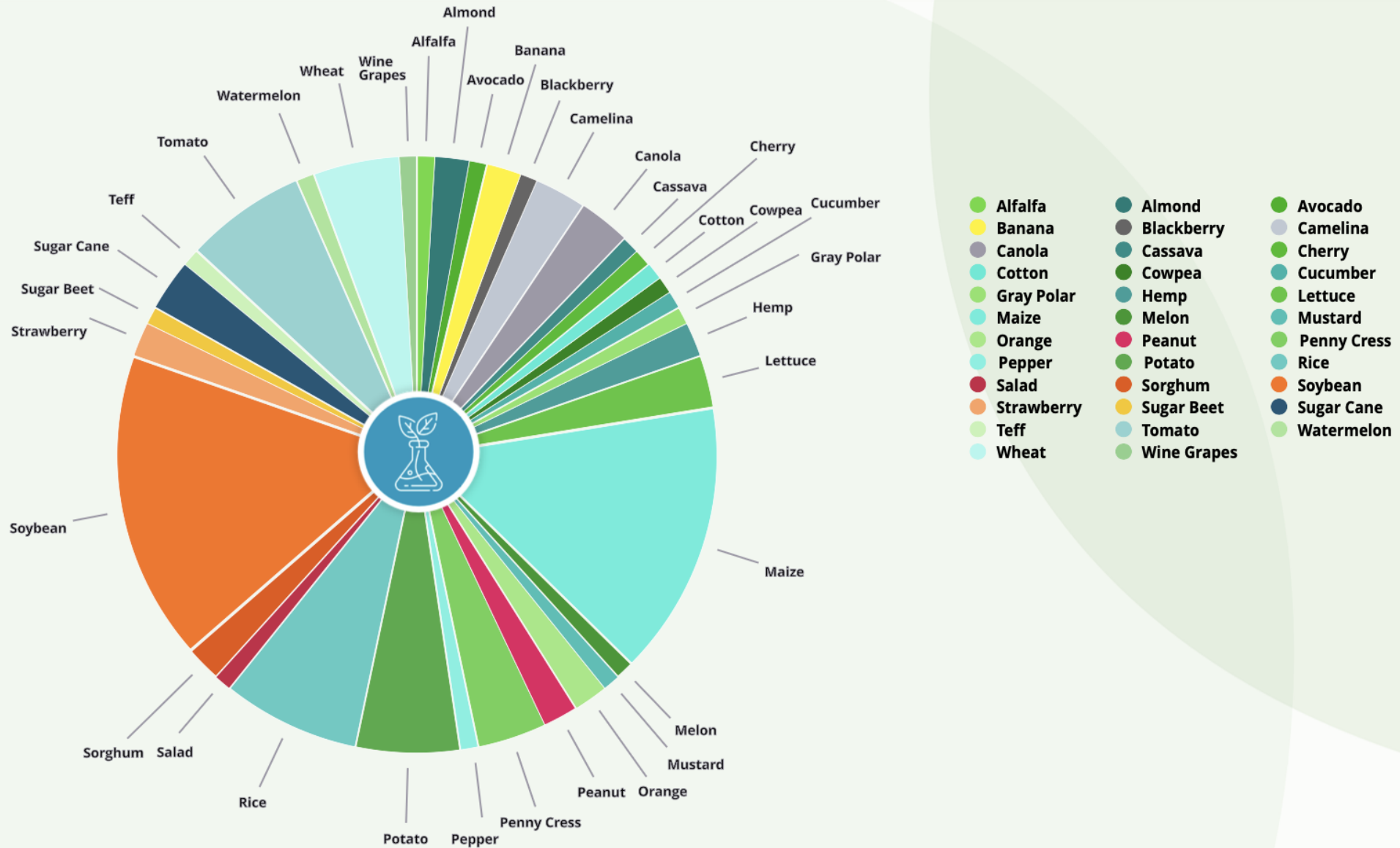


In which countries & on which plants is research being carried out?

GRAPHIC 2 New GMOs in Development: Where the Developers are based



GRAPHIC 1 New GMOs in Development





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Which traits are being researched (and why)?

The rising challenge of resistant weeds.

Weeds compete with crops for essential resources — water, light, and nutrients. While herbicides are the main control strategy, many pose risks to the crops themselves. On top of that, overuse has led to the rise of resistant weeds, compromising long-term sustainability.



Sorghum



Rice

BioHeuris projects that the HR-rice and sorghum varieties will be available in the market by 2026 or 2027.



Tropic's Non Browning Banana Named One of TIME's Best Inventions 2025

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Which plants are
“cleared for market access”?

Preview: \$1 Billion+¹ Market Opportunity in North America Corn

Multi-Disease Resistance (MDR) Corn

- Gene editing-enabled product with resistance to three key corn diseases for initial launch²
- Broad spectrum “in the seed” control helps growers manage year-to-year disease fluctuations
- Design simplicity allows introduction across hybrids and market segments
- Yield protection under even extremely high disease pressure

 NA launch³ in 2028

Trait Performance Under Heavy Southern Corn Rust (SCR)



NLB testing trials were overwhelmed with extreme natural SCR pressure. MDR-containing plants outyielded controls on average by 50bu/ac⁴

RBG Imagery
Field Trials

NDVI Imagery
Field Trials

August 26, 2025

¹ \$595M for Grey Leaf Spot, \$210M for Anthracnose Stalk Rot, \$221M for Southern Rust, \$212M for Northern Leaf Blight | Source: CPN Report for US & CA market, years 2017-2023.

² Three key diseases for initial launch: Northern Leaf Blight, Southern Rust, and Gray Leaf Spot (Anthracnose Stalk Rot planned for future inclusion)

³ Launch pending applicable global regulatory reviews and completion of field testing

⁴ Replicated field trials done without fungicide application in Johnston, IA 2025

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What does “cleared for market access” mean in terms of actual marketing and cultivation?



Companies can release gene-edited organisms into the food system and environment without any government risk assessment and without notifying the government or the public.

Therefore in the case of Canada the category "cleared for market access" is misleading because there is no process to "clear" the product.

→ With regard to future market developments, we recommend keeping a close eye on the plants marked in orange, as they may soon be cultivated!

TABLE 2 New GMOs in Development

Crop	Trait	Technique	Developer	Country (of Developer)	Cleared for market access*	Remarks	References
75 Soybean	Quality trait improvement	CRISPR	Shandong Shunfeng Biotechnology Co., Ltd.	CHN	CHN	2023: "Mutation of gmfad2-1a and gmfad2-1b genes for quality trait improvement in soybean AE15-18-1. Agricultural GMO Safety Certificate No. Nong Ji An Zheng Zi (2023) No. 114."	The data was provided by ProTerra.
76 Soybean	High yield	CRISPR	Suzhou Qihe Biotechnology Co., Ltd. (Qi Biodesign)	CHN	CHN	2024: "Mutated GmLn gene to improve soybean yield traits (QH64112). Agricultural GMO Safety Certificate No. Nong Ji An Zheng Zi (2024) No. 294."	https://apps.fas.usda.gov
77 Soybean	Quality trait improvement	CRISPR	Suzhou Qihe Biotechnology Co., Ltd. (Qi Biodesign)	CHN	CHN	2023: "Quality trait improved soybean P16. Agricultural GMO Safety Certificate No. Nong Ji An Zheng Zi (2023) No. 351."	The data was provided by ProTerra.
78 Soybean	Improved physiological traits	CRISPR	China Seed Group Co., Ltd	CHN	CHN	2024: "Mutated GmE1 and GmE1Lb genes to improve soybeans physiological traits (E001SYFT)."	https://apps.fas.usda.gov
79 Soybean	Improved protein content	CRISPR	Amfora	USA	USA	2024: "The U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS) has granted Amfora, Inc. an exemption for its gene-edited, ultra-high protein soybeans. Amfora's gene-edited soybeans are not subject to the regulations in 7 CFR Part 340 and can be marketed without undergoing further review by the USDA."*	https://www.isaaa.org
80 Soybean	High yield	CRISPR	Inari Agriculture Inc.	USA	No information	2025: "Closest to commercialisation are our first-generation high-yielding soybeans. Our customers will bulk up products for commercialisation soon, and in the meantime, their farmers can see our edited plants this summer at demo plots across the US."	https://www.agtechnavigator.com
81 Soybean	Drought tolerance	CRISPR	GDM	ARG	No information	2025: "GDM, a leading seed company in Argentina, is developing a gene-edited soybean variety that maintains growth under water stress by disabling a gene responsible for the plant's drought-response inhibition. The resulting variety is expected to show improved productivity in dry conditions, such as those experienced during 'veranicos' – short droughts with high temperatures – in southern Brazil. Commercial launch is planned for the 2027/2028 harvest, with early demand anticipated in water-stressed regions like Rio Grande do Sul."	https://www.plantetp.eu
82 Soybean	Drought tolerance	CRISPR	La Semilla Co. Ltd.	KOR	USA	2025: "APHIS confirmation of the regulatory status of genome edited soybean with drought tolerance. Intended activities for these soybean mutant plants within the United States include the importation, interstate movement, and environmental release (field trials)."	https://www.aphis.usda.gov



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Why is there a discrepancy between “cleared for market access” and the lack of marketing or cultivation?



Table 1. Top 9 corporations in the commercial seeds sector

Ranking	Company (Headquarters)	Sales in 2023 (US\$ millions)	% Global market share ¹⁹
1	Bayer (Germany) ²⁰	11,613	23
2	Corteva (US) ²¹	9,472	19
3	Syngenta (China/Switzerland) ²²	4,751	10
4	BASF (Germany) ²³	2,122	4
	Total top 4	27,958	56
5	Vilmorin & Cie (Groupe Limagrain) (France) ²⁴	1,984	4
6	KWS (Germany) ²⁵	1,815	4
7	DLF Seeds (Denmark) ²⁶	838	2
8	Sakata Seeds (Japan) ²⁷	649	1
9	Kaneko Seeds (Japan) ²⁸	451	0.9
	Total top 9	33,695	67
	Total world market²⁹	50,000	100%

The dominance of a few very large agrochemical and seed companies, which hold the majority of intellectual property rights, can make it difficult for new companies and start-ups to enter the market.

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Compared with 2025, the number of plants “cleared for market access” has more than doubled. The same applies for countries.
What is the reason for this?

Disappeared from the market:

The logo for calyxt features the word "calyxt" in a lowercase, green, sans-serif font. A small pink flower-like icon is positioned above the letter 'y'.The logo for BENSON HILL features the words "BENSON" and "HILL" in a bold, blue, uppercase, sans-serif font. A small circular icon with a yellow center and a green ring is placed between the two words. Below the main text, the tagline "NOURISHING INNOVATION™" is written in a smaller, blue, uppercase, sans-serif font.The logo for Yield10 BIOSCIENCE features a stylized icon on the left consisting of a green leaf shape and a white number "10" inside a green circle. To the right of the icon, the words "Yield10" are written in a large, green, sans-serif font, with "BIOSCIENCE" in a smaller, green, uppercase, sans-serif font below it.

New companies/start-ups:

The logo for Ohalo features a colorful geometric icon above the word "Ohalo". The icon is composed of several triangles in shades of blue, green, orange, and yellow. The word "Ohalo" is written in a bold, dark blue, sans-serif font.The logo for IngateyGen features a stylized orange and grey DNA double helix icon to the left of the word "IngateyGen". The word "IngateyGen" is written in a dark grey, sans-serif font.The logo for The Traits Company features a stylized icon on the left consisting of three vertical bars in blue, green, and brown. To the right of the icon, the words "The Traits Company" are written in a bold, black, sans-serif font.

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Does Non-GMO-production will remain possible even after the deregulation of

New GMOs?

YES!



GDM, a leading seed company in Argentina, is developing a **new GM-soybean variety that maintains growth under water stress**. The resulting variety is expected to show improved productivity in dry conditions, which are common in southern Brazil. According to the company **commercial launch** is planned for the **2027/2028 harvest**, with “early demand anticipated in water-stressed regions like Rio Grande do Sul”.

CLIMATE CHANGE

Floods in Rio Grande do Sul exposed the climate crisis

A year ago, extreme rainfall caused the worst flood in southern Brasil, affecting 2.3 million people. Combining climate change, irregular urbanization, and inadequate infrastructure, the 2024 floods underscored the urgent need for global action. Experts highlight COP30 as a critical forum for debates and solutions to prevent future catastrophes. Reconstruction demands radical changes, they warn.





Thank you!

