

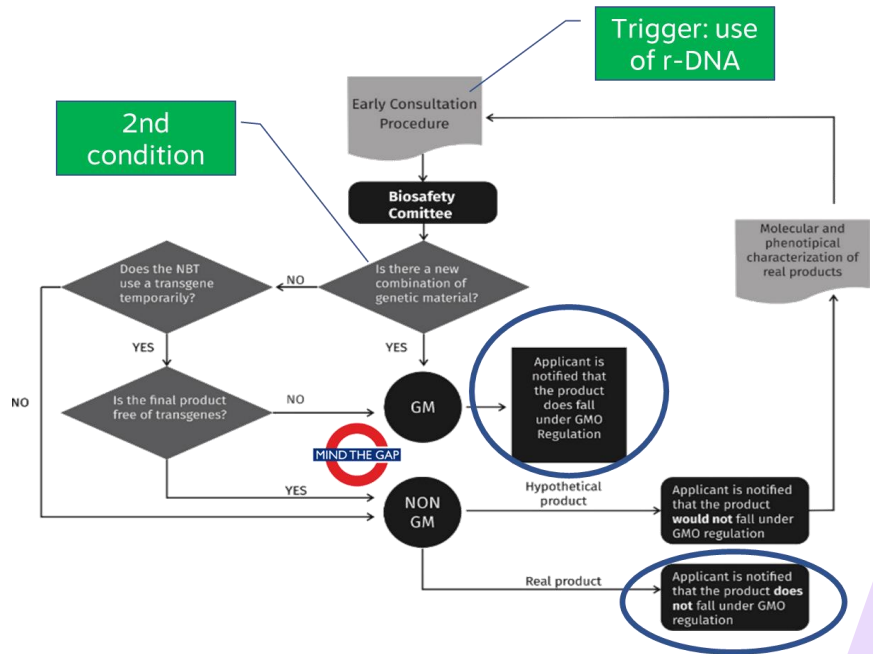
Economic Effects of Genome Editing - The Case of SMEs in Argentina

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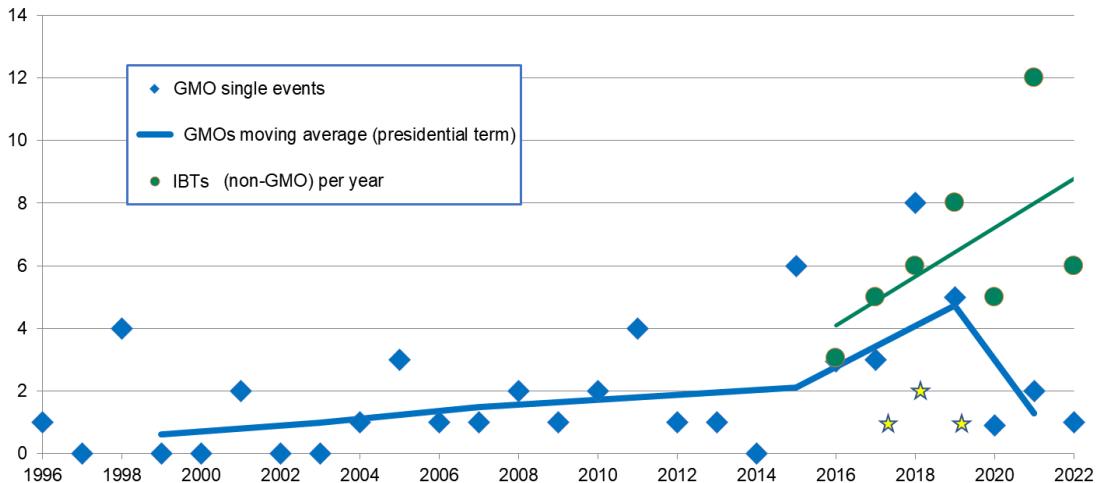
The OECD Co-operative Research Programme:
Sustainable Agricultural and Food Systems

Analysis & Decision-making process



Factor	Genetically Modified Organisms	Gene-Edited Organisms
1- DNA sequences	- Insertions and flanking sequences	- On/Off target edits - Spurious DNA insertions
2- Newly expressed proteins	- Protein expression - Toxicity/allergenicity of newly expressed proteins	- No newly expressed proteins
3- Other data	- Composition analysis - Trait and overall phenotype analysis	- Only if there is a risk hypothesis - (Trait and overall phenotype analysis)
4- Field trials	Pre-approval, for 2+3 (\$\$\$) and variety characterization (registration data)	Post non-GMO confirmation, for variety characterization (\$)
5- Investment uncertainty	- Relatively higher (political), market risk assessment, long term.	- Relatively lower (social – production chain), short term.
6 – time to (local) market	- 6/10 yrs.	- 4/8 yrs.

Agbiotech: Continuity of a public policy

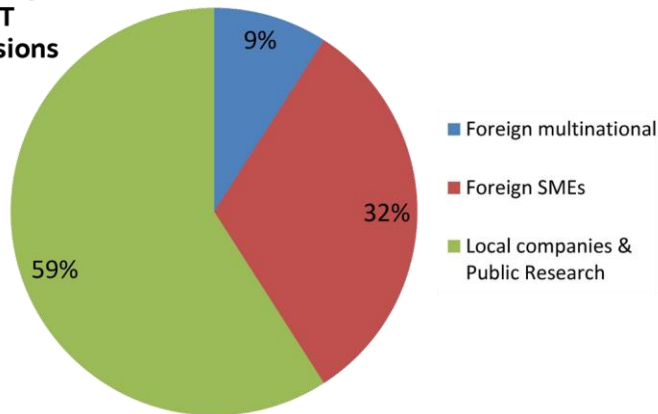


Global Conference on
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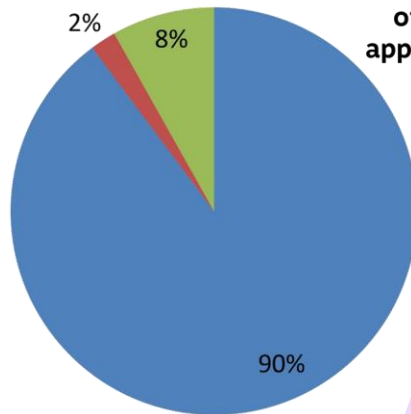
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Applicants' profile

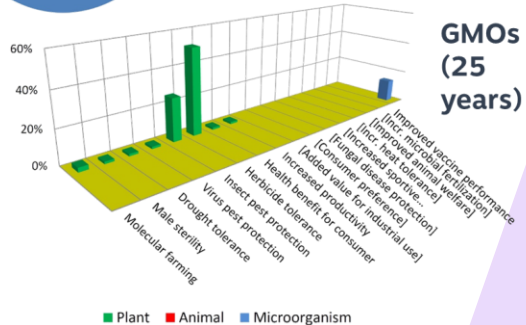
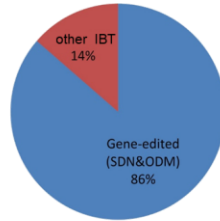
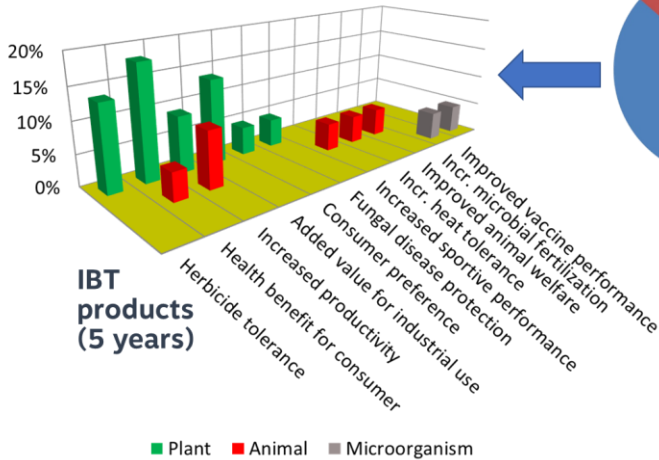
First 5 years
of IBT
decisions



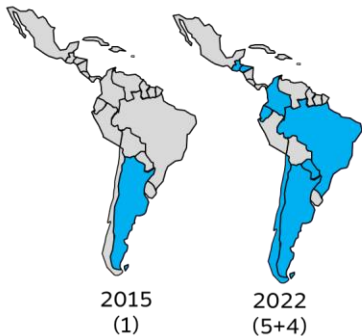
25 years
of GMO
approvals



Products' diversity



Other LATAM countries



Gene editing could create spicy tomatoes, say researchers

Scientists also looking at altering colour of kiwis and taste of strawberries



Evogene and TMG Announce Collaboration to Develop Nematode Resistant Soybean through Genome Editing

Both parties to have commercialization rights

Rehovot, Israel & Cambé, Brazil- December 18, 2018 – Evogene Ltd. (NASDAQ, TSE: EVGN), a leading biotechnology company developing novel products for life science marks & TMG – Tropical Melhoramento & Genética S/A, a leading plant breeding company aiming develop genetic solutions to delivery yield and profit to growers and collaborate to meet t world demand for grains and fibers; announced today a collaboration for the development

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Adequate regulation fosters P&P investment in R&D

THE FORAGES OF THE FUTURE

Edit the alfalfa genome to increase its yield

From the INTA interest of the future and efficiency.

AgNews

Global Precision Crop Protection
Intelligent Satelite Provider
Basic Producer for Synthesia

WED, 09/04/2019 - AgroNews Markets

Biotechnology

They are Argentine group of laboratories from cannabis

Three entrepreneurs applied their without the psychoactive component

August 4, 2022 - 15:27

Fabiola Czuba | THE MATCH


Bioheuris soybean variety

Comment ☆ Favo

Bioheuris
First Gene-Editing Competition

Argentinian company Bioheuris that promises to revolutionize soybean resistant to herbicide

The local regulators have not (GMO). Local website Javier and stated, "This will let the



They achieve a key advance edition of cattle

Researchers from INTA and the University of San Martín use the genome of embryos produced in vitro. In three of the four edit the beta-lactoglobulin gene, the main allergen present in

WED, 09/12/2018 - 10:30 Photos: INTA-Biotech

gene edition beta-lactoglobulin


Don Mario is fully open tolerance,

Posted by Javier Preciado



Argentine scientists edit gene

The investigation was carried out in embryos, because, until now, the genetic modification



LA NACION

THE NATION ECONOMY COUNTRYSIDE

Unpublished: they managed to edit a bull to improve meat production



RECOMMEND

Alberto's labor with four photos with Mo

The true and the false Alberto

A group of Argentine scientists managed to genetically edit the "Fuego" bull of the Brangus vaccine breed to advance more lean and productive animals with meat.

Common features

- Time to market: concept proof + introgression + variety registration + premarket multiplication.
- Most started after/because local/regional regulation was implemented. All still exist because of it.
- Product development choices influenced by European/(Chinese) policies and competition with multinationals' "blockbuster" products.
- "weak" JVs with USA/African/(European) SMEs.
- High survival rate.
- Low lobby/associativity power.

Many thanks for your attention



Suggested further reading:

- *Gene editing regulation and innovation economics. Whelan, Gutti, & Lema (2020).*
- *Regulation of Genome Editing in Argentina. Whelan & Lema (2019).*
- *A research program for the socioeconomic impacts of gene editing regulation. Whelan & Lema (2017).*

*Contact info and
links to publications*