

**GMOs fooling the world
for 20 years**



2017

What is a GMO?

A genetically modified organism (GMO) is an animal, plant or micro-organism (for example, a bacteria) that has been modified in the laboratory by adding or subtracting a gene such that a given characteristic—which was not present before—is expressed.

How are GMOs made?

GMOs are produced in a laboratory rather than by selecting and crossbreeding plants in the field. A scientist isolates the desired gene from a given species and then adds it to the chromosome of another organism, inserting the gene into the cell of the organism they want to modify. This organism may belong to a completely different species.

Reality Check



Debunking the Myths:

1. GM crops will end world hunger
2. GM crops are more productive
3. GM crops will eliminate agrochemicals
4. Farmers can decide for themselves
5. GM crops pose no threat to health and environment

Who owns GMOs technology

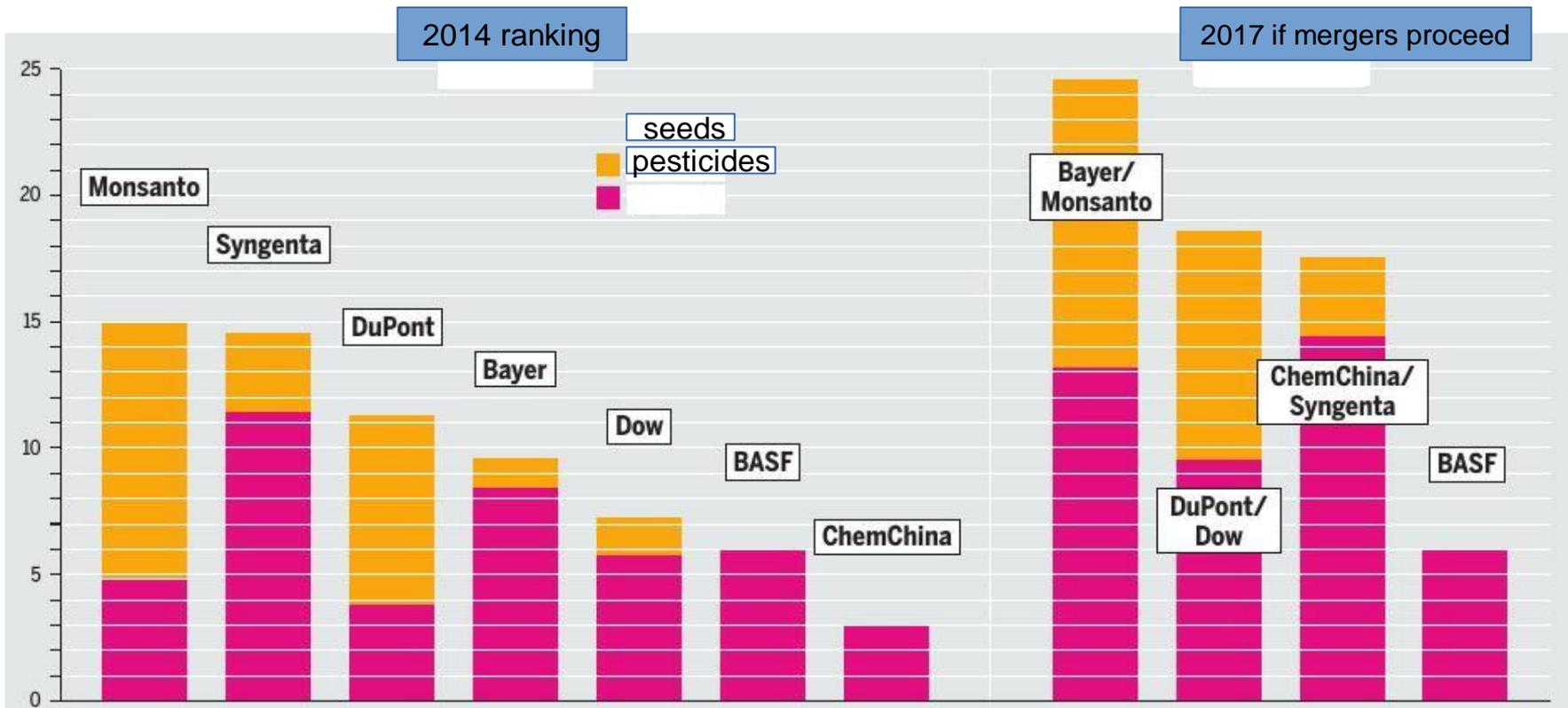
The same company who also control 90% of global seed trade:

1. Monsanto
2. Pioneer (DuPont)
3. Syngenta, this is now majority owns by ChemChina
4. Dow Agrosiences
5. BASF
6. Bayer



Who benefits?

Top seed & pesticide companies, worldwide (in USD billions)



Source: Konzernatlas, HBS, Jan 2017



GM crops approved and under cultivation



Country	Approved for food /feed*	Approved for cultivation*	Under cultivation*	Area (Mha) (2013)
China	7	8	cotton, papaya, tomato, sweet pepper	4.0
India	1	1	cotton	10.8
Japan	9	8	--	--
Korea	6	3	--	---
Malaysia	2	--	--	---
Myanmar	1	1	cotton	0.3
Pakistan	1	1	cotton	2.8
Philippines	7	1	Maize	0.8
Thailand	2	----	---	---

* As on 14.06.2013

Source: <http://bch.cbd.int/database/decisions>; ISAAA

Vietnam's GM Corn Output in 2015, 2016 and forecast for 2017

	Unit	2015	2016 (estimated)	2017 (forecast)
Harvested area	Thousand ha	1,179	1,300	1,300
Productivity	Ton/ha	4.48	4.6	4.8
Output	Thousand tone	5,281	5,980	6,240

Source: Vietnam MARD

Also in April 2015, the approval of GM corns has helped **Vietnam become the 29th country in the world** committing to commercializing crops using biotechnology.



GM corns cultivation for experiment in Vietnam
Photo: Saigon Economic Time

Public Private Partnership (PPP) blurred line

- Despite various evidences, the myth of GM crops seems to stick and translated into public regulations.
- With strong people's resistance to GM food crops, governments are forced to think twice on turning seed supplies to TNCs, but they still believe on GM.

“Yes, we want GM seeds, but we want our public institutions to be involved in the development to safeguard national interest”

“India is lack of large scale publicly funded biotechnology effort in agriculture” – Jairam Ramesh, India Environment Minister, during his report imposing Bt Brinjal moratorium

Partnering to Push GM crops, entry point for corporates

- Golden rice → IRRI with Syngenta

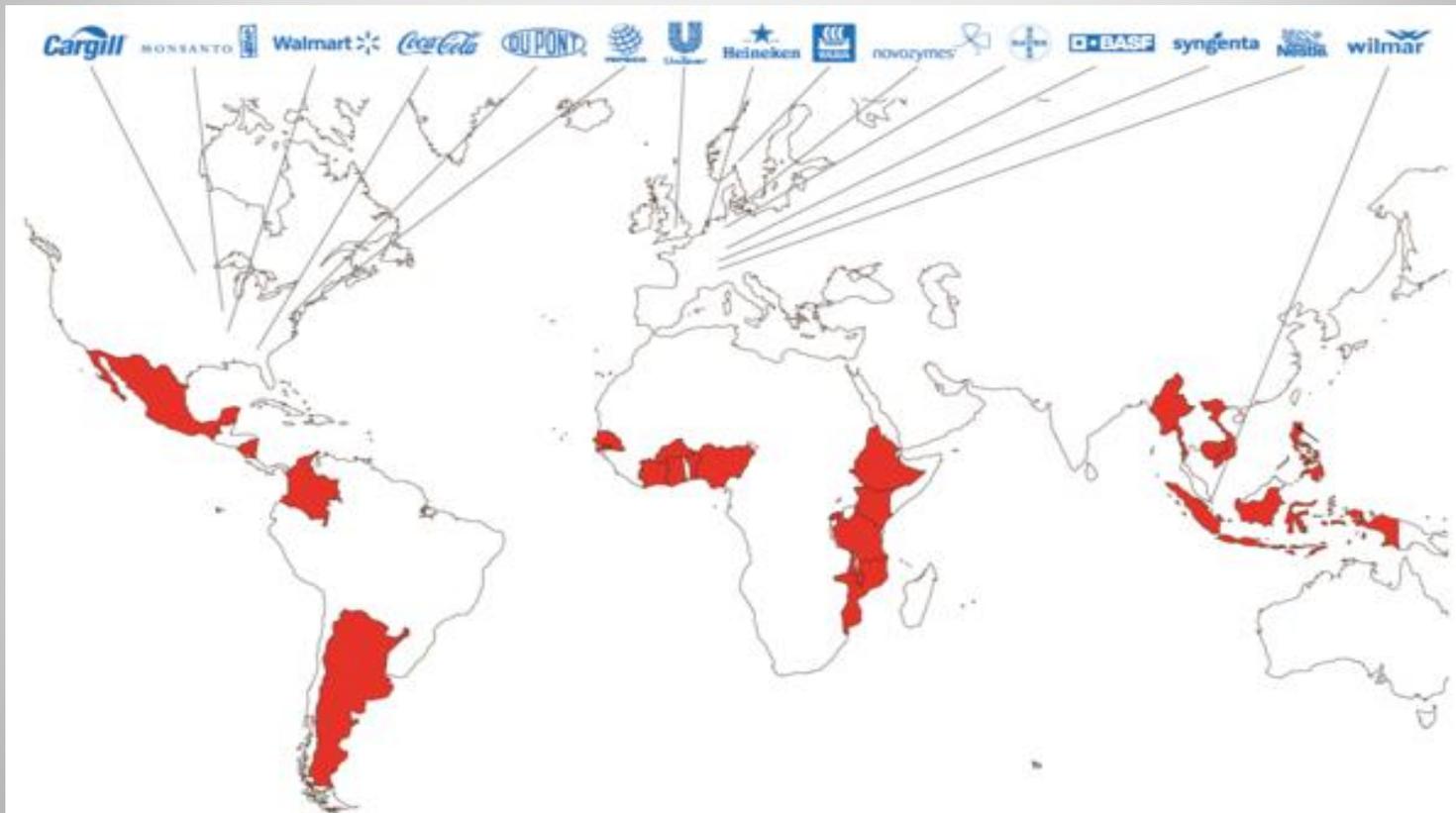
“IRRI should continue to campaign for GE as legitimate breeders’ tool, using golden rice as a flagship” – CGIAR technical advisory committee

- Bt Brinjal → Monsanto with Tamil Nadu agriculture university (TNAU), Indian institute of vegetable research

- Bt Corn → Monsanto with Indonesia Ministry of Agriculture

“transgenic corn will increase national production to achieve national self sufficiency”- Indonesia Minister of Agriculture

GROW Asia – new vision of corporate capture through PPP



Grow countries and year programme launched:

Grow Latin America: Mexico (2011), Nicaragua (2016), Argentina (under development), Colombia (under development)

Grow Africa: Benin (2015), Burkina Faso (2014), Côte d'Ivoire (2014), Ethiopia (2012), Ghana (2012), Kenya (2011), Malawi (2014), Nigeria (2014), Mozambique (2014), Rwanda (2011), Senegal (2015), Tanzania (2011)

Grow Asia: Cambodia (2015), Indonesia (2011), Myanmar (2013), Philippines (2015), Vietnam (2011)

Grow project on the ground:

1. Monsanto and Syngenta's maize project in Vietnam

converting traditional rice production for food to maize production for animal feed within five years.

2. Contract farming for Lay's potato chips in West Nusa Tenggara, Indonesia

3. Cargill and Monsanto's maize farming project in Indonesia

Under an agreement among Monsanto, Cargill, BRI and three farmers' groups, credit is given to farmers to buy Monsanto's seeds and produce maize for Cargill's Indonesian feed mill.