



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

Institute of Ag Professionals

Proceedings of the

**2015 Annual Meeting
of the
Institute of Ag Professionals**

Tuesday, December 8

www.extension.umn.edu/Ag-Professionals

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NO GMO
or
KNOW GMO

@RSaik

RSaik@AGRI-TREND.com

Will agriculture lose
significant science
to Non-Science?

@Rsaik

@knowGMOmovie

@AGRITREND



THE AGRI-TREND® NETWORK



PROFESSIONAL. AGRICULTURAL. COACHING.



AGRI-TREND®
THE POWER TO PERFORM

PEOPLE. PROCESS. PLATFORM.
Our services revolve around working with growers to **GROW** the crop, **SELL** the crop and **MANAGE** the money.

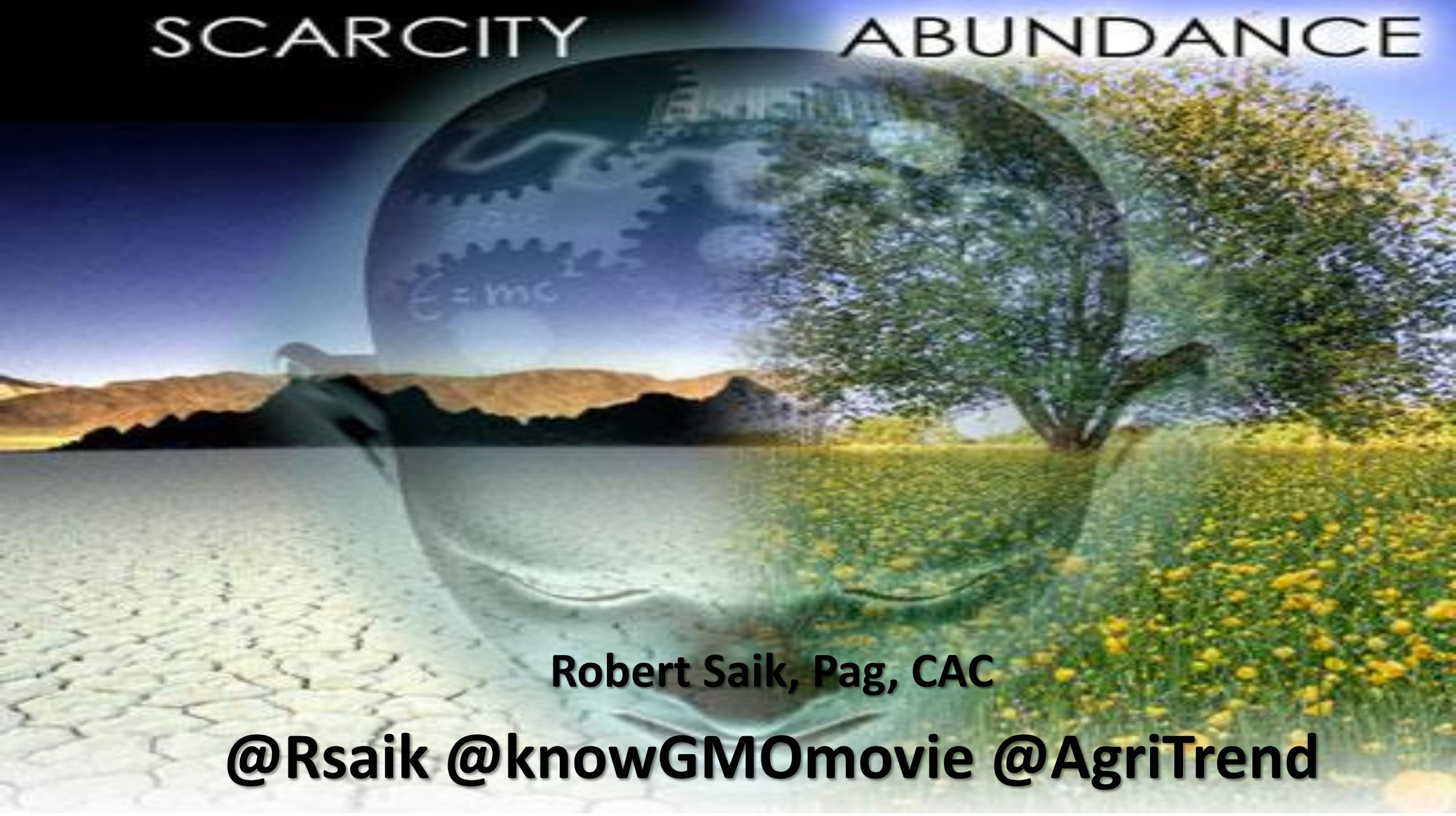


PUT YOUR FARM IN THE CLOUD


THE AGRI-DATA™
SOLUTION

SCARCITY

ABUNDANCE



Robert Saik, Pag, CAC

@Rsaik @knowGMOmovie @AgriTrend

The big picture

The REALLY **BIG** PICTURE

The World's 50 Greatest Leaders (2014)



by Fortune Editors MARCH 20, 2014, 11:56 AM EST

43 Peter Diamandis

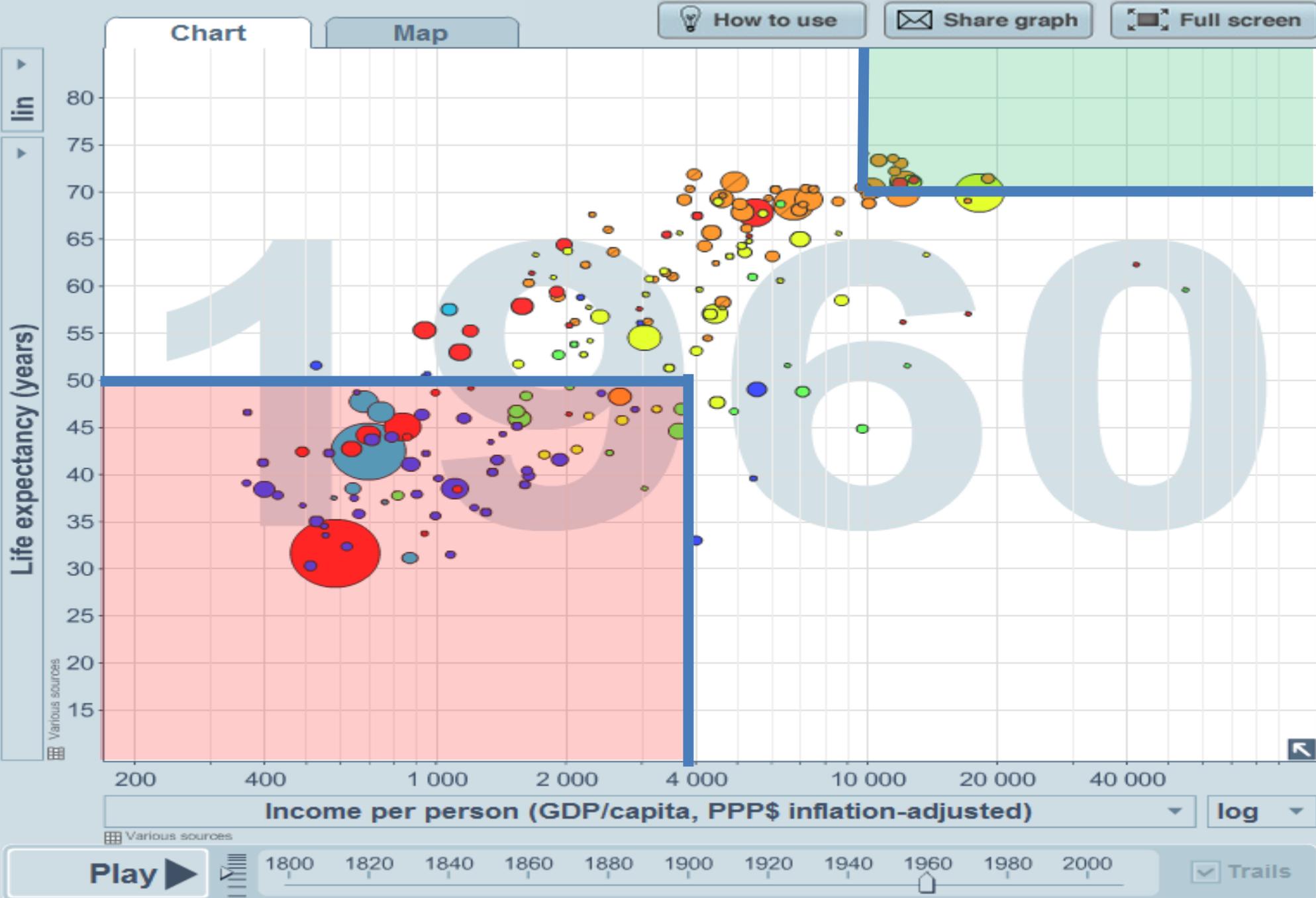


Photograph by Michael Nagle — Bloomberg/Getty Images

Peter Diamandis

Apart from the 14 other companies he has founded, Diamandis presides over X Prize Foundation, which hosts \$10 million competitions to solve global problems. "He has an infectious optimism, which becomes a self-fulfilling prophecy," says futurist Ray Kurzweil. He makes "each person understand that their role is critical to the success of their organization and in turn that the overall project is critical to transforming the world."





Color | Gapminder Geogra... |

Geographic regions |

Select

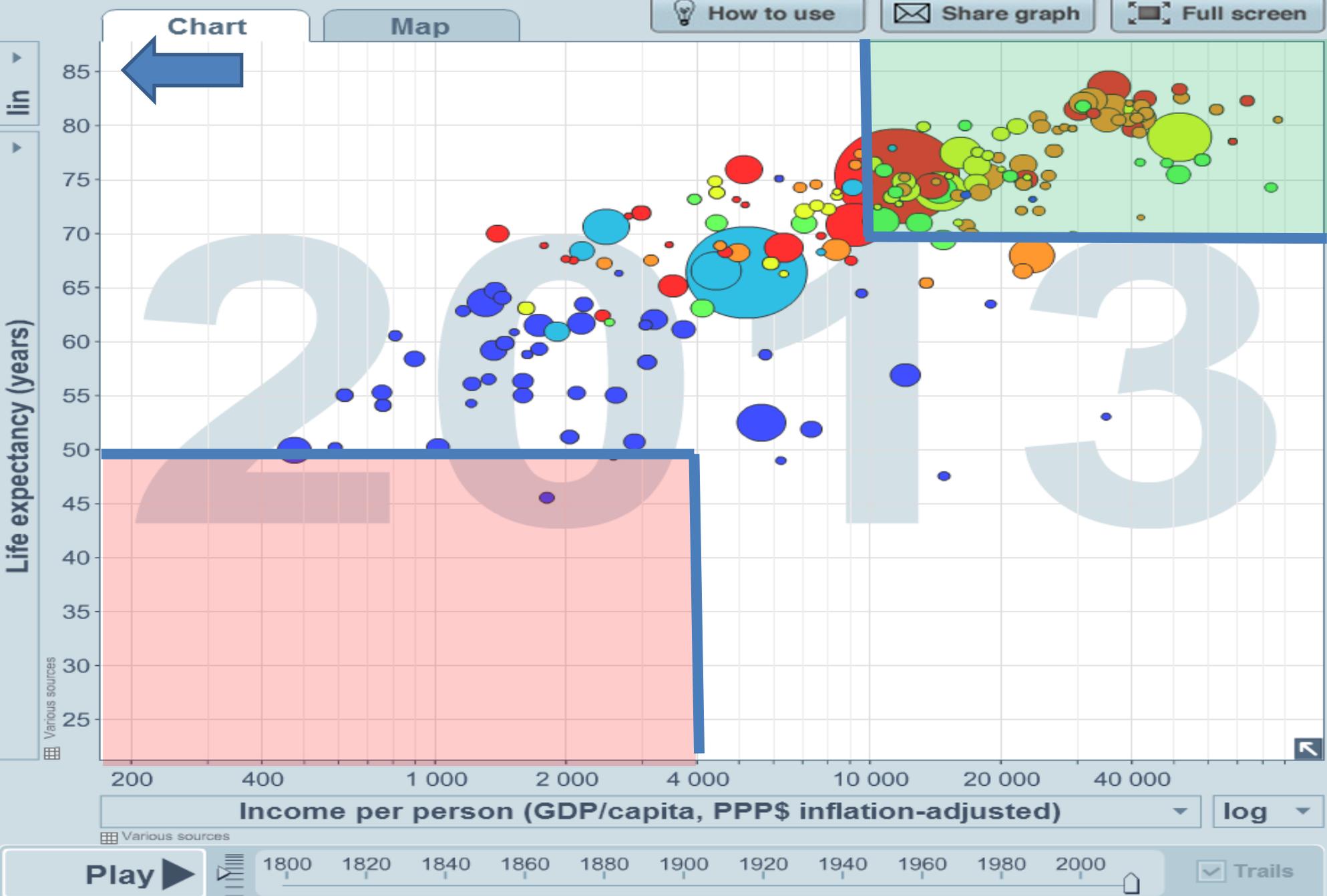
- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

Deselect all

Size | Various sources |

Population, total |

0 | 1.36 B



Color | Gapminder Geogra...

Geographic regions

Select

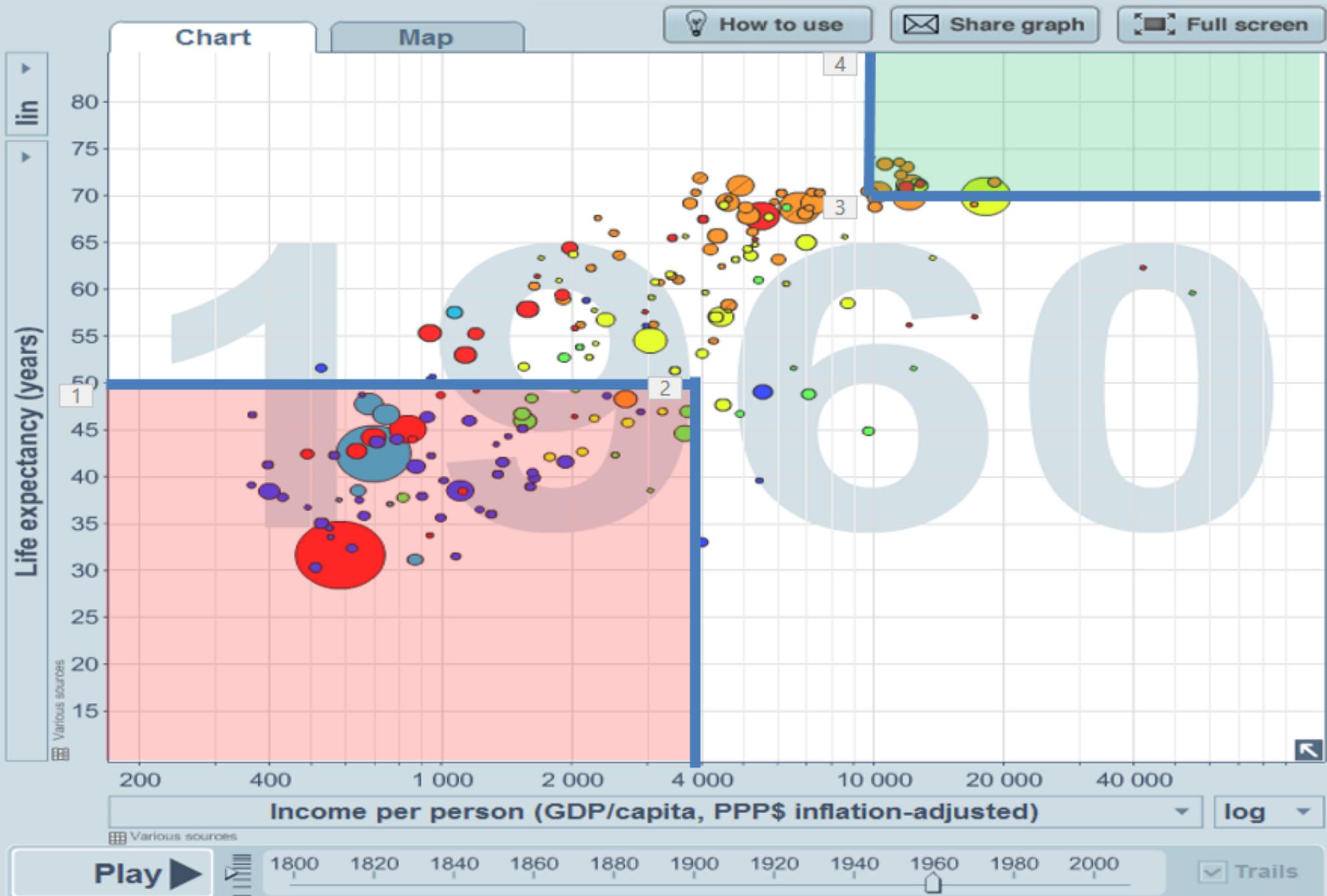
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- Albania
- Algeria
- Angola
- Antigua and Barbu...
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain

Deselect all

Size | Various sources

Population, total

0 | 1.36 B



Color | Gapminder Geogra... |

Geographic regions |

Select

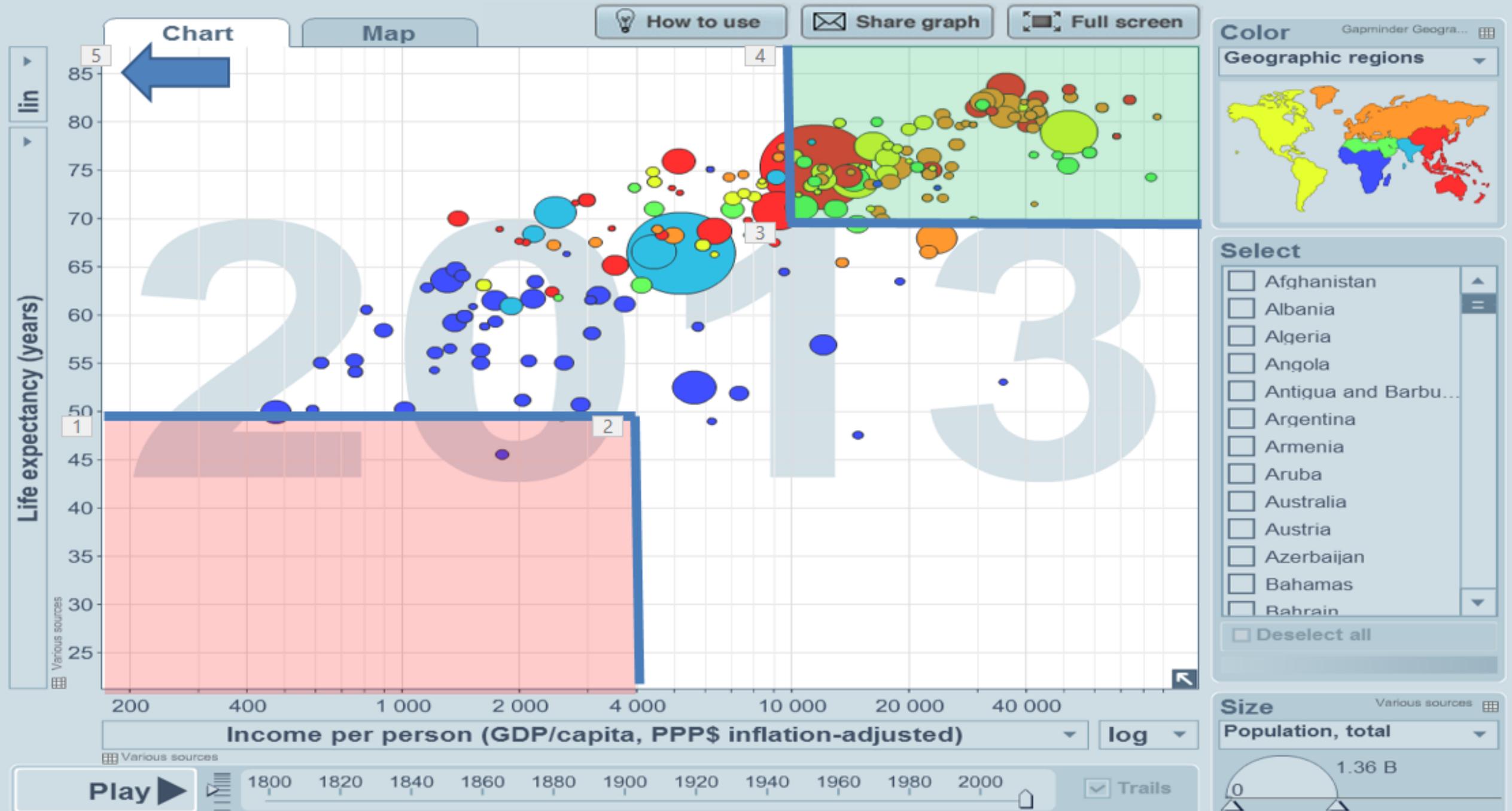
- Afghanistan
- Albania
- Algeria
- Angola
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh

Deselect all

Size | Various sources |

Population, total |

0 | 1.36 B



We're just float'in down a river...



Our World

- Exponentiality
- 5 EXABYTES
- Ideas having sex?
- Now ideas have orgies

When IDEAS have SEX

70s



NOW

Population
Explosion →
future is Black

There are good
more prosperous
2x population

HOW?



Hand
Axe
(Stone
Age)



No Progress



One Substance



Computer
Mouse
(Home
Systems)



Changes
Rapidly



Multiple Substances



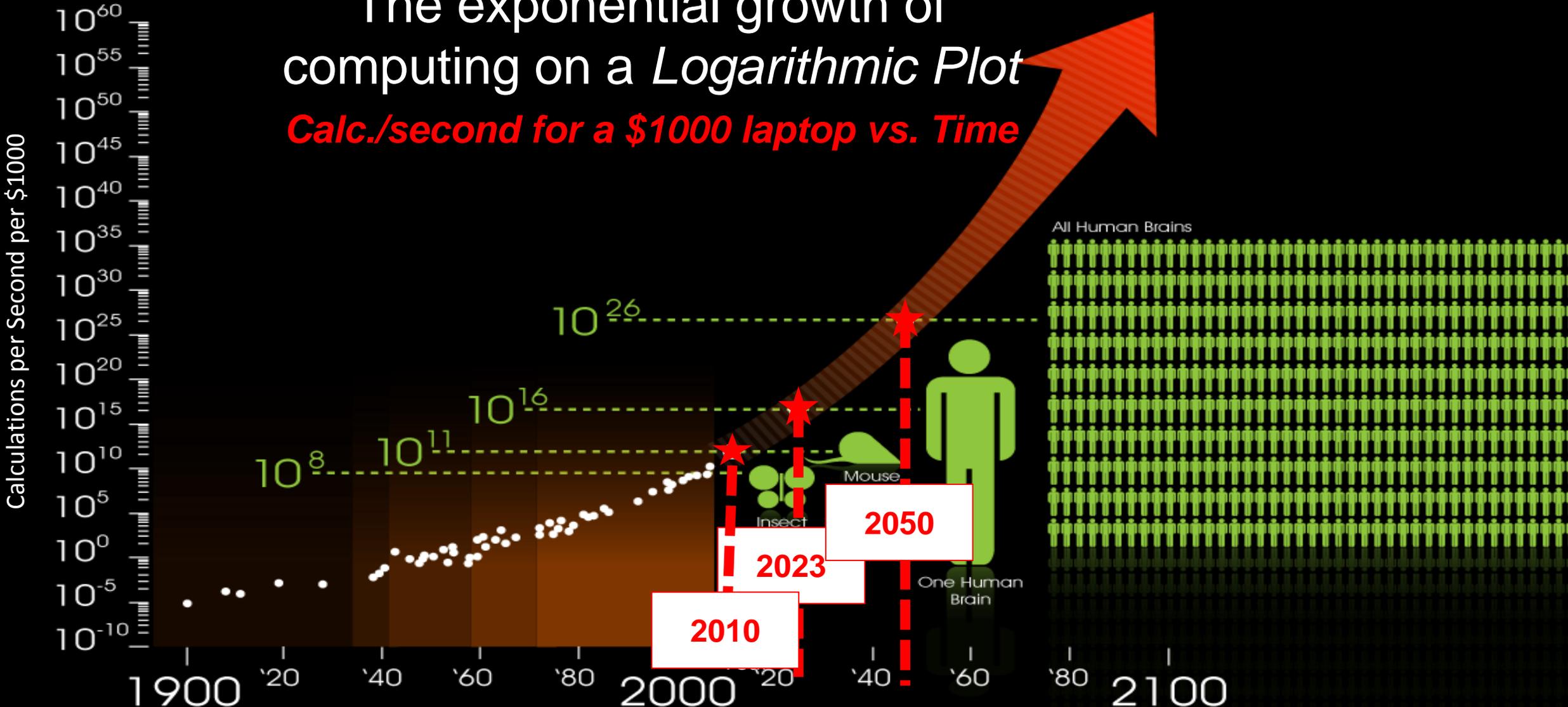
Exchange =

Cultural Sex
Exchange of ideas

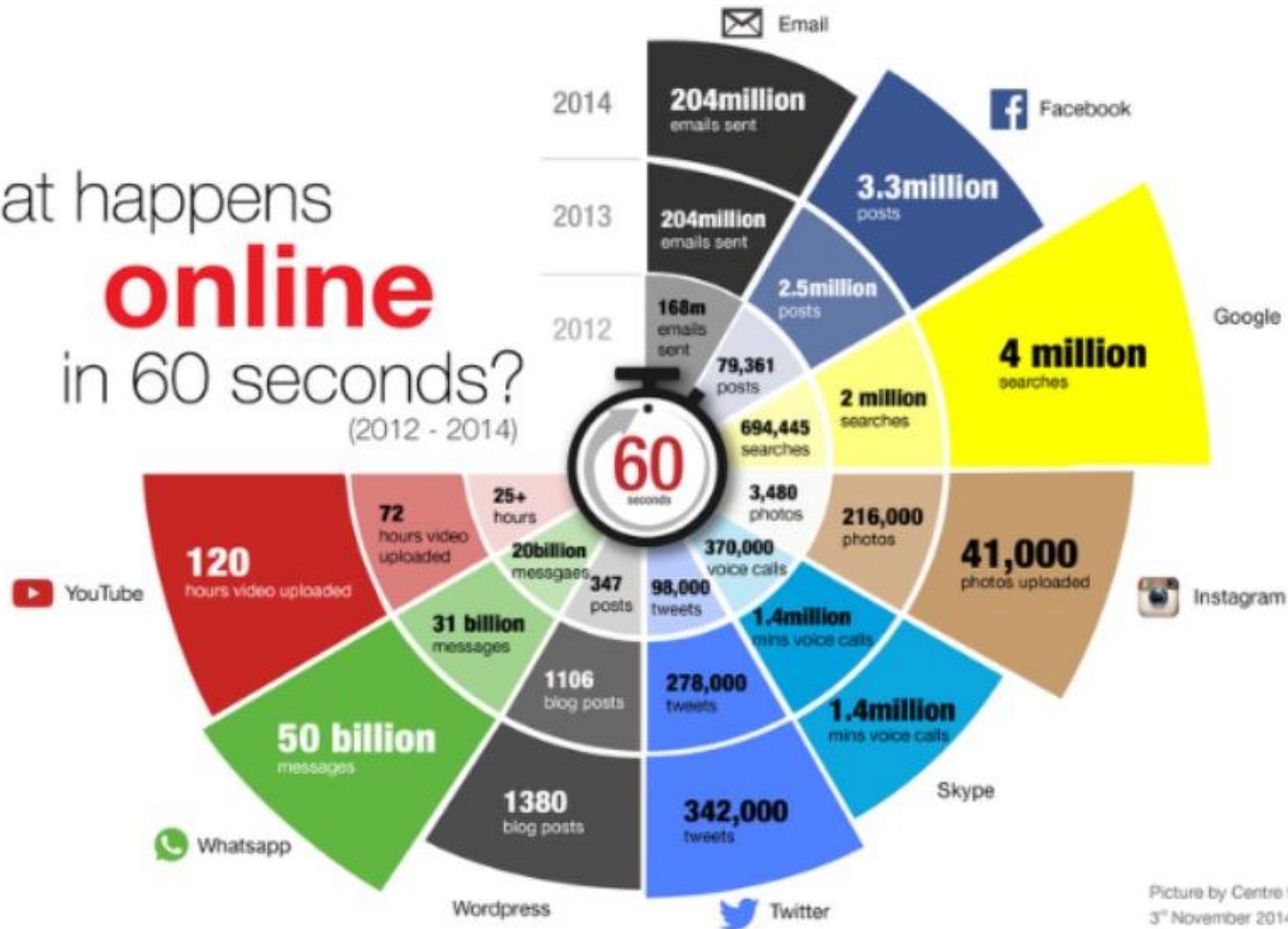
EXPONENTIAL + GLOBAL

The exponential growth of computing on a *Logarithmic Plot*

Calc./second for a \$1000 laptop vs. Time



What happens online in 60 seconds? (2012 - 2014)



The Problem is, people have a romanticized view of agriculture.. Not 1960 Anymore

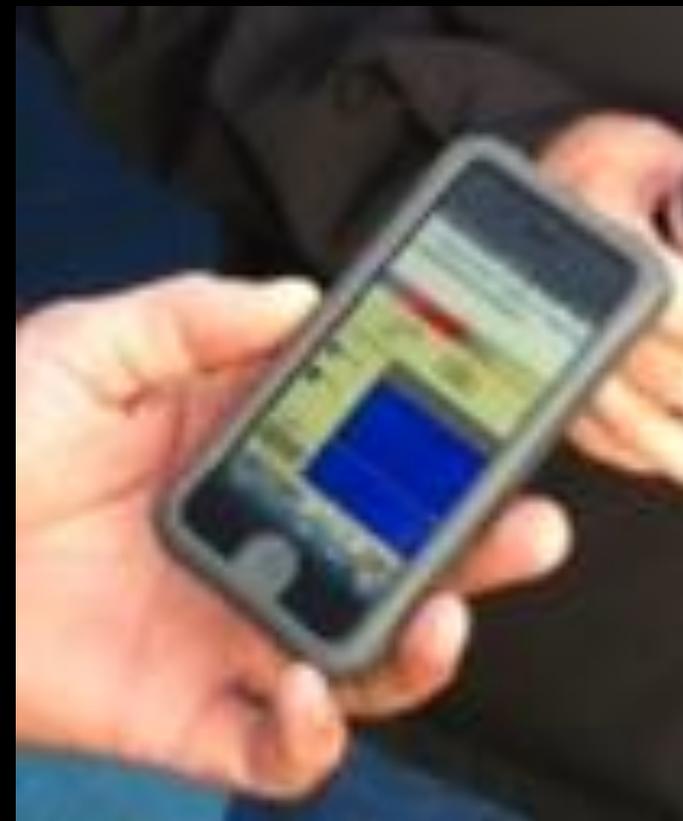


There is a need for technology.



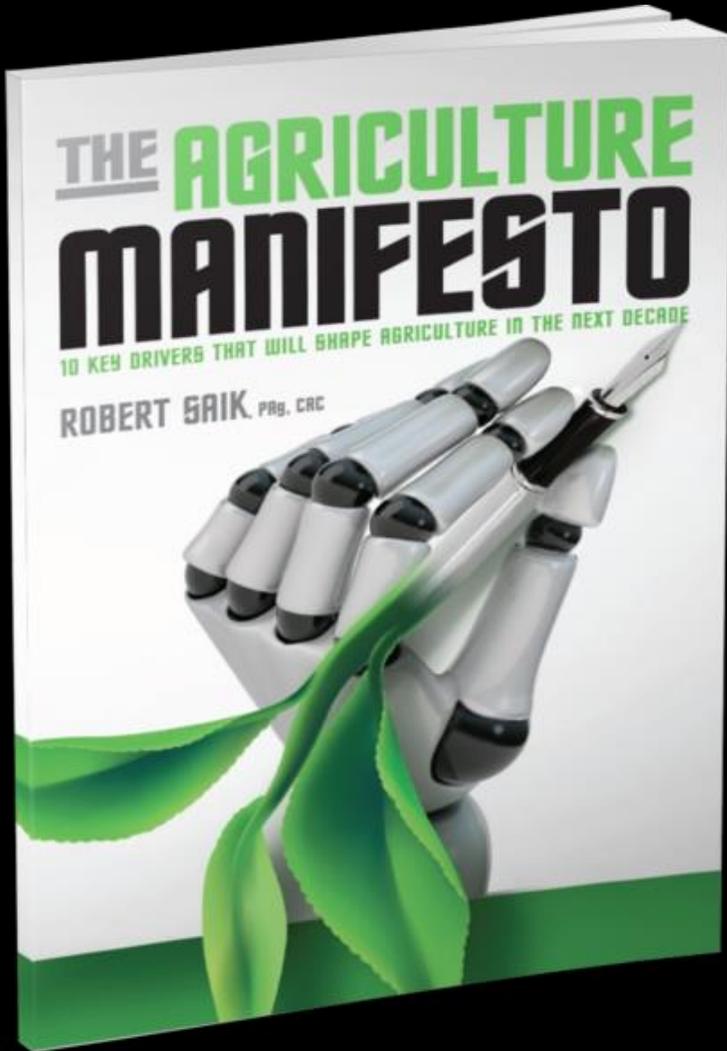
That was then....

This is now....



The Agriculture Manifesto

10 Key Drivers that will Shape Agriculture in the Next Decade



1. NON-Science
2. Bio-Synthesis
3. Market Segmentation
4. Sensor Technology
5. 3-D Printing
6. Robotics
7. Water
8. Precision Ag
9. Artificial Intelligence
10. Data

Will agriculture lose
significant science
to Non-Science?

I believe the NON-Science movement is the biggest threat to global food security.

We have to begin shouting out of darkness!





Figure 1. Levels of evidence



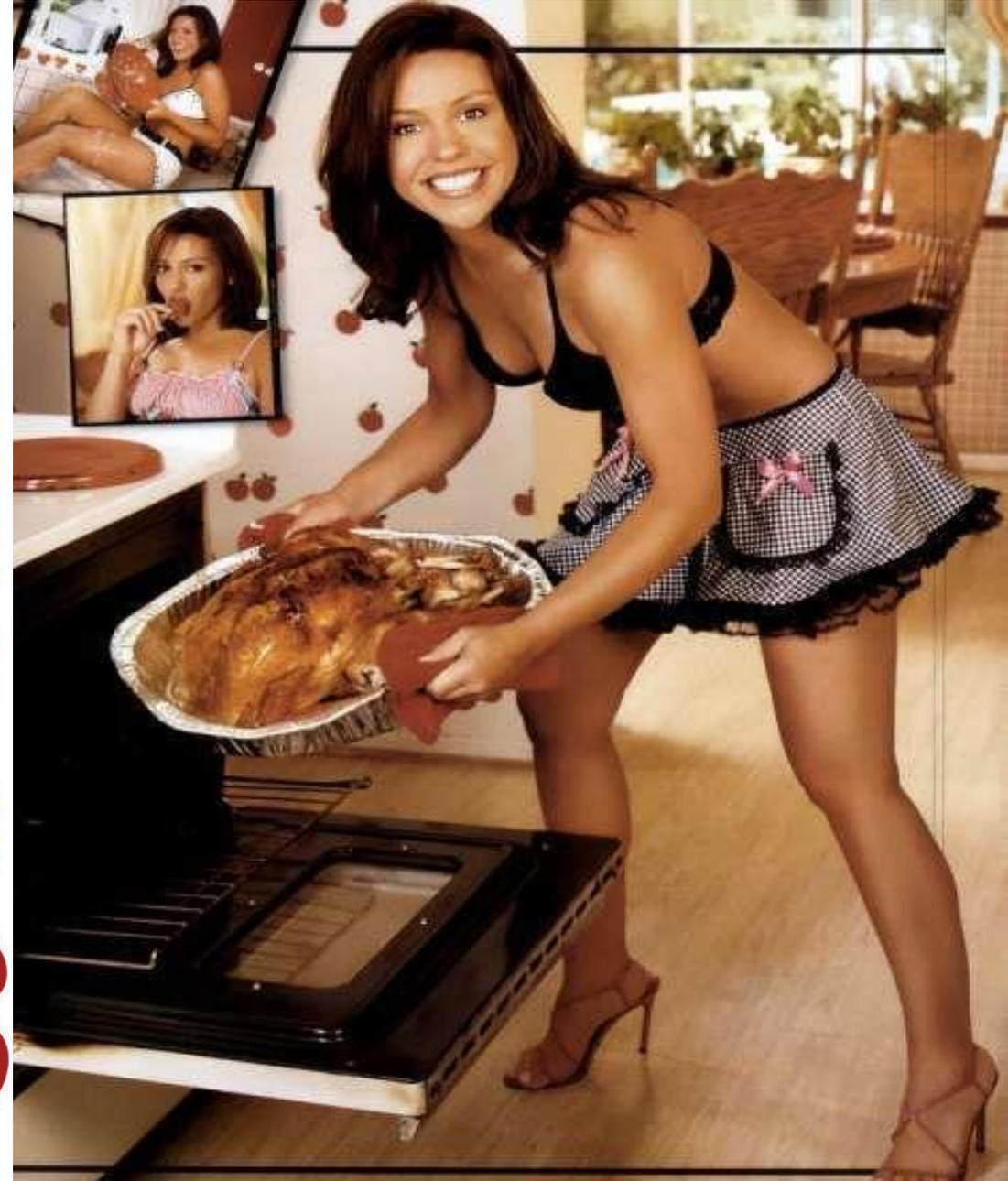
Figure 1. Levels of evidence

Who's
in the
driver's seat?



Food Trends and Food "Experts"

Home Cooked
Fermented Food
Fat-Free Foods
Fuss-Free Food
Detox Diet
Mini Indulgences
Mexican Food
Organic food
Bring Your Own Food
Paleolithic Diet
Raw Food
Street Food
Gluten-free food
Comfort Foods
Food Trends



The attack on Canola Oil



Did you know that more than 90% of canola in the U.S. is genetically engineered?

Initiative 522 gives you the information you need to make informed decisions about the food you buy.

YES-522
yeson522.com #YesOn522



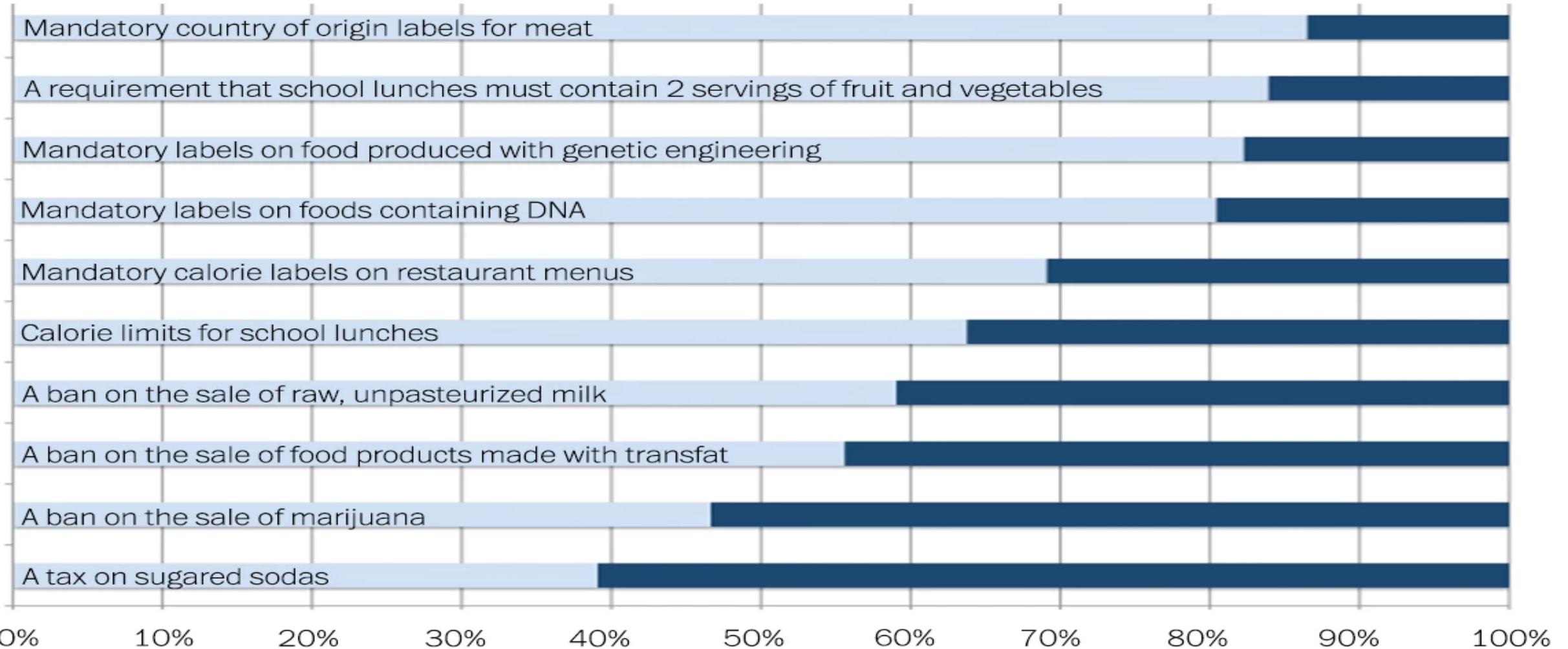
**Processed To Death –
Get These Cooking Oils Out of Your
Pantry STAT!**

FOODBABE.COM

82% say GMO should be labeled

% of 1,000 respondents who support or oppose food policies

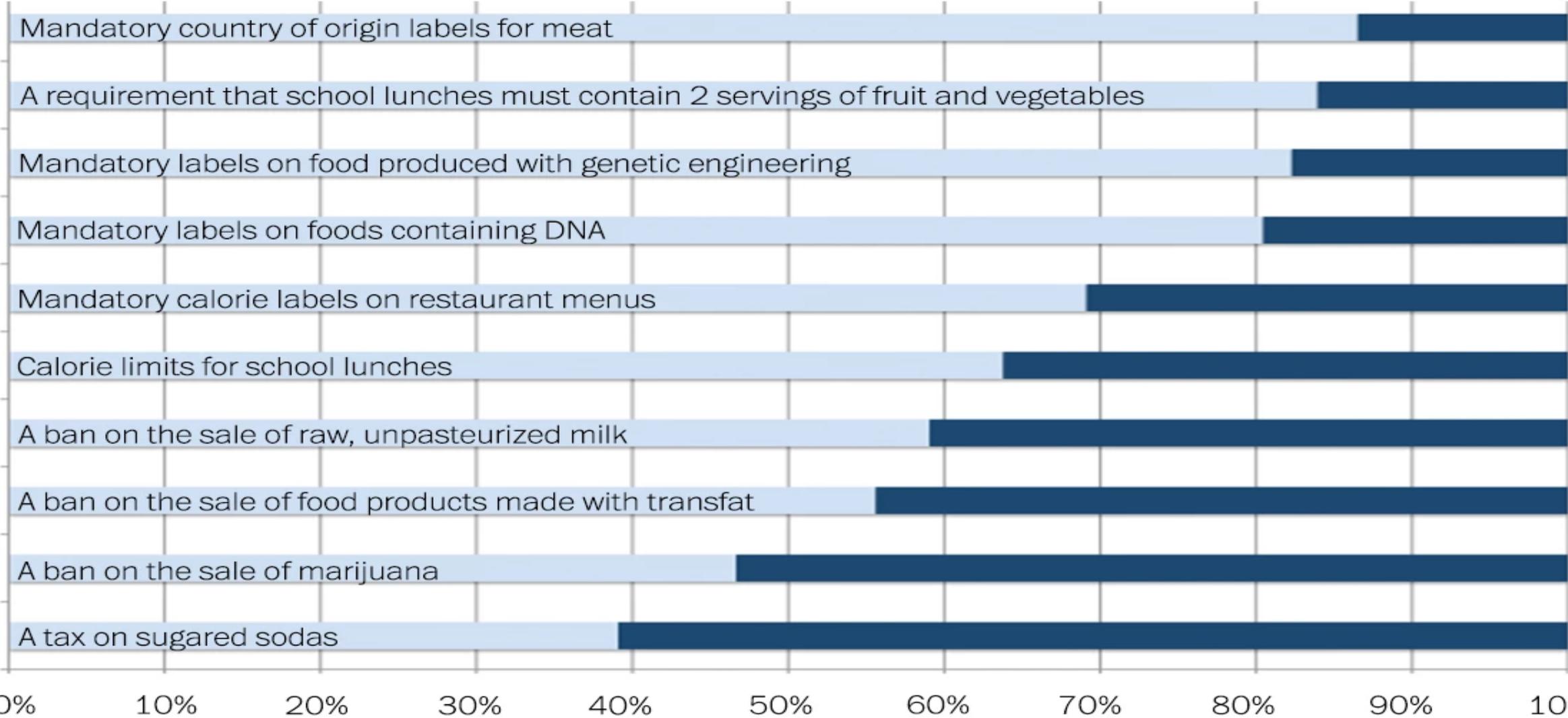
Support Oppose



80.44% say Food Containing DNA should be labeled

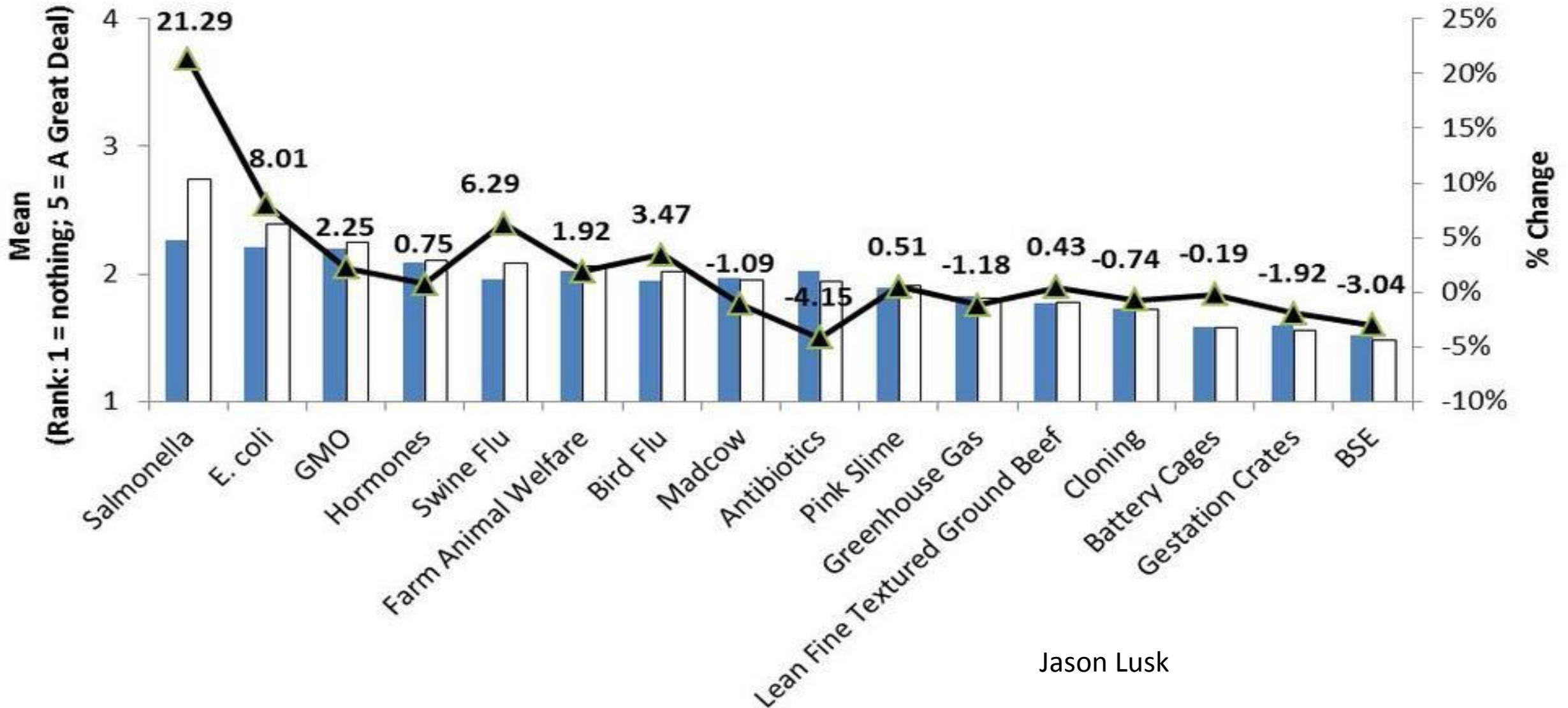
% of 1,000 respondents who support or oppose food policies

Support Oppose



Awareness of Food Issues

September October % Change





BOUGHT

**THE HIDDEN STORY
BEHIND VACCINES,
BIG PHARMA
AND YOUR FOOD.**



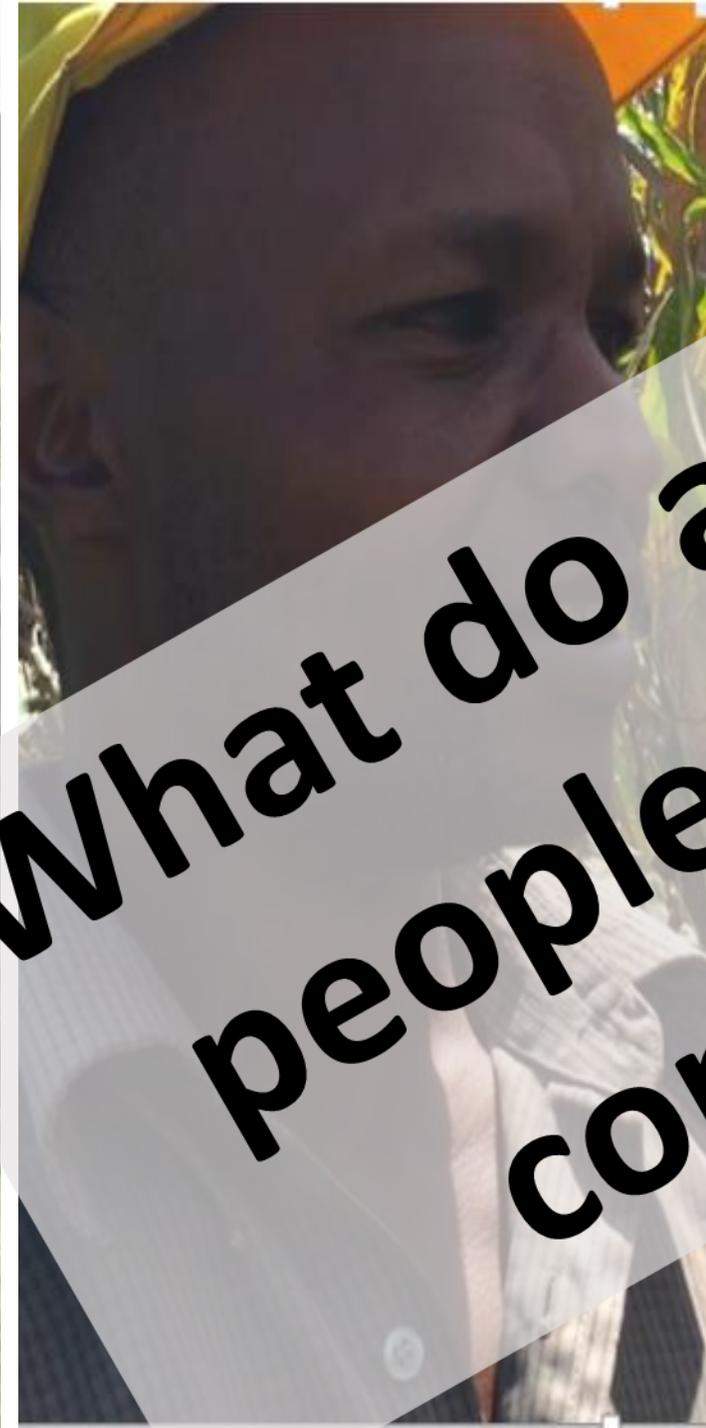


Robert Saik

TEDxRedDeer

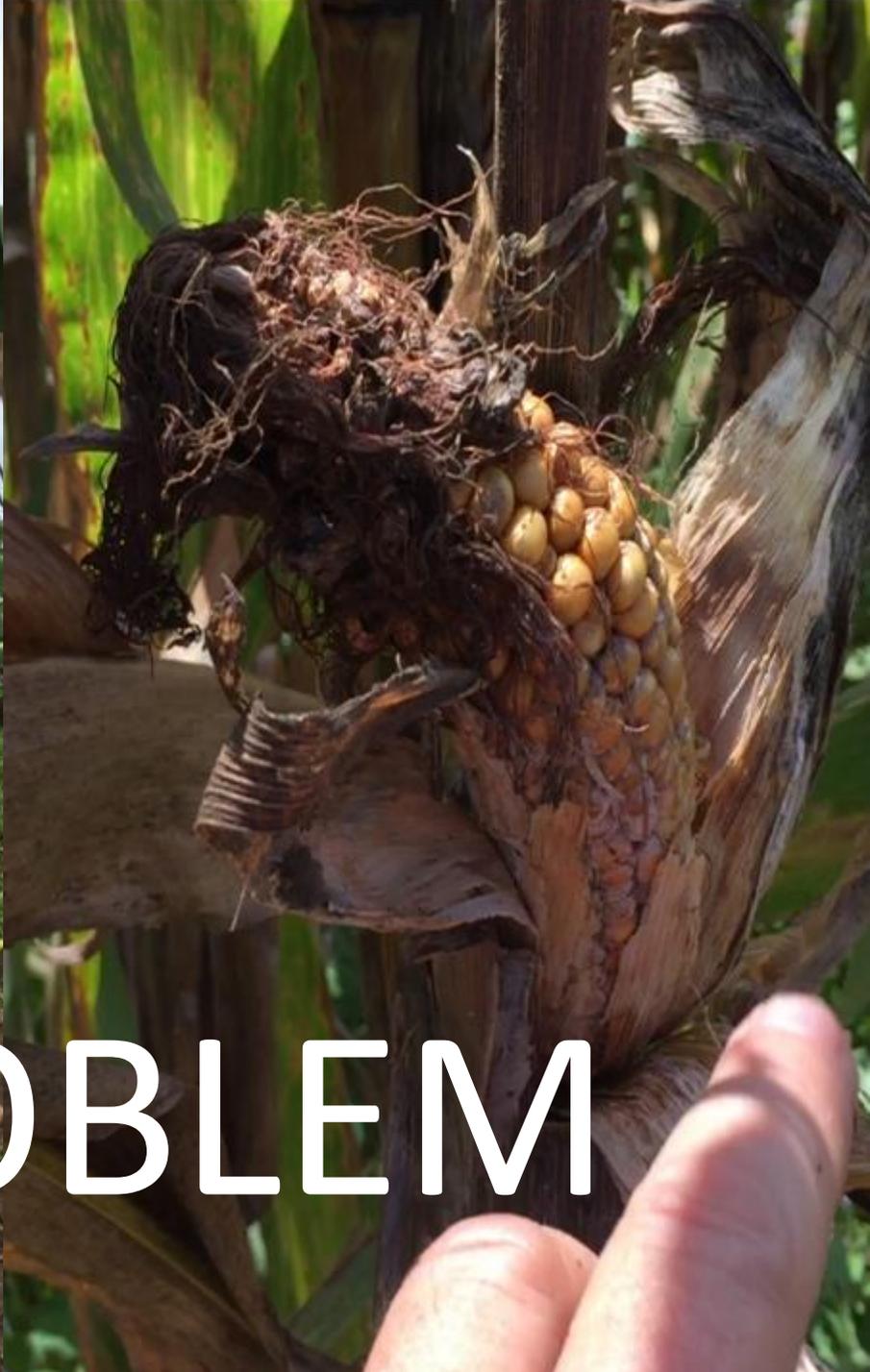
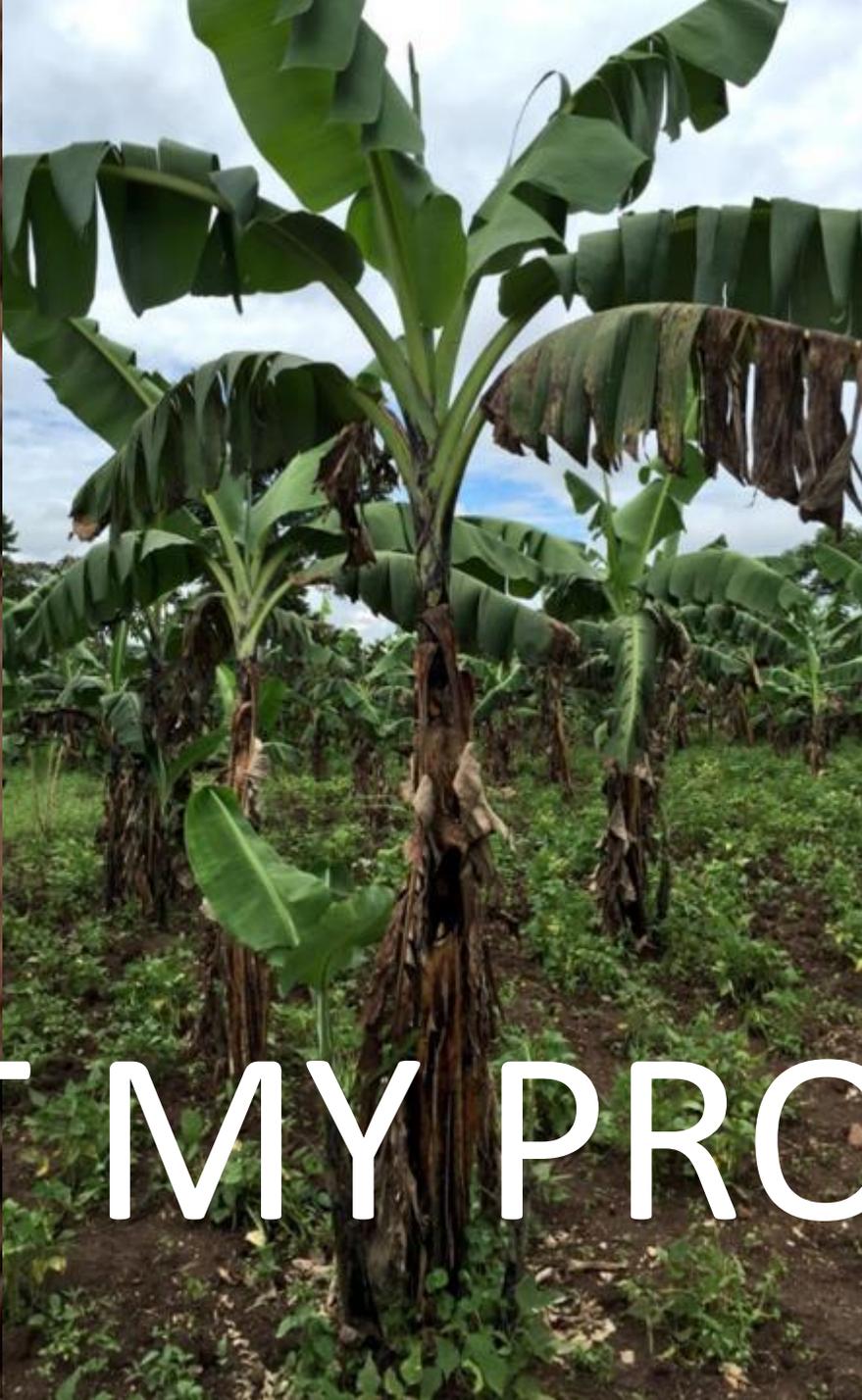
Will agriculture be **ALLOWED** to feed 9 billion people?





**What do all these
people have in
common?**





NOT MY PROBLEM



**We will need agriculture technology,
including Genetic Engineering
if we are going to maintain
global food security.**

Fanaticism is causing global suffering.

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Genetic engineering could be a threat to human and environmental health



Paul Latracker / Zentix / Greenpeace

Number of children under the age of 5
who **DIED** from
Malnutrition
(2013)

Economist Magazine – 2013 Statistics

3,100,000

Economist Magazine – 2013 Statistics

Number of children
who died
from GMO

Economist Magazine – 2013 Statistics

0

EVER

Economist Magazine – 2013 Statistics

Food Paranoia

a FIRST WORLD problem



AQUA SKY TOWER

STOP
TODAY
GMO



NO GMO'S
I AM A
WARRIOR



OMG!

HELL
NO
GMO

Monsanto
CKS!

HELL NO
GMO

GMO
8





Who is “Shilling” for Who?

**WHOLE
FOODS**
MARKET

2014 – \$14.2 Billion

Their customers (the other 99%)

Twitter – 4,600,000 Followers

2014 - \$15.8 Billion

Their customers (farmers ~ 1% pop.)

Twitter – 69,000 Followers

MONSANTO





Q. What's the difference between these peppers?

A. \$250,000.00



Because we can afford to pay 30% - 300%
more to support our food philosophy,
does that give us the right
to condemn those who can't?

Vivienne Westwood – Fashion Designer - November 12, 2014

Those who “can’t afford organic food” should “EAT LESS”



**The ANTI-Science movement is the greatest
THREAT to global food security today.**

**The voices of science are being drowned
out by the voices of fear and paranoia.**

1st world activism/elitism is hurting the poorest people on the planet.

**We are going to need science including
GMO to feed 9 billion people!**

We should
CELEBRATE
Agriculture's Success!

Organic

Local

Fertilizer

Pesticides

Genetic Engineering

Could the future of food be...

Genetically

Modified

ORGANIC

When did the
ORGANIC movement
become the
Anti-GMO Movement?



NATURAL & ORGANIC
ALL NEW PRODUCTS AVAILABLE ONLINE NOW!

NEW EYE PENCILS & LIPSTICK SHADES
 YOU ASKED FOR IT AND WE LISTENED!

MULBERRY & CHERRY PASSION ORGANIC LIPSTICKS ARE BACK!!

NEW MEDIUM BROWN & DARK BROWN ORGANIC EYE PENCILS

Allergy Free, Food Grade Cosmetics.
 No GMO, Corn Free, Soy Free,
 Gluten Free, Grain Free, No Dyes,
 No Preservatives, No Chemicals!

NOT TESTED ON ANIMALS
 GLUTEN-FREE
 CORN FREE
 NON-GMO

USDA ORGANIC

Explore the healthy world
 of **Non-GMO** [Shop all](#)

Foods & Beverages Vitamins & Supplements Beauty & Personal Care Sports & Fitness Babies & Kids Pet Health

Label spin = \$\$\$

GMO

Natural

Organic

only \$7.99 per 3 oz



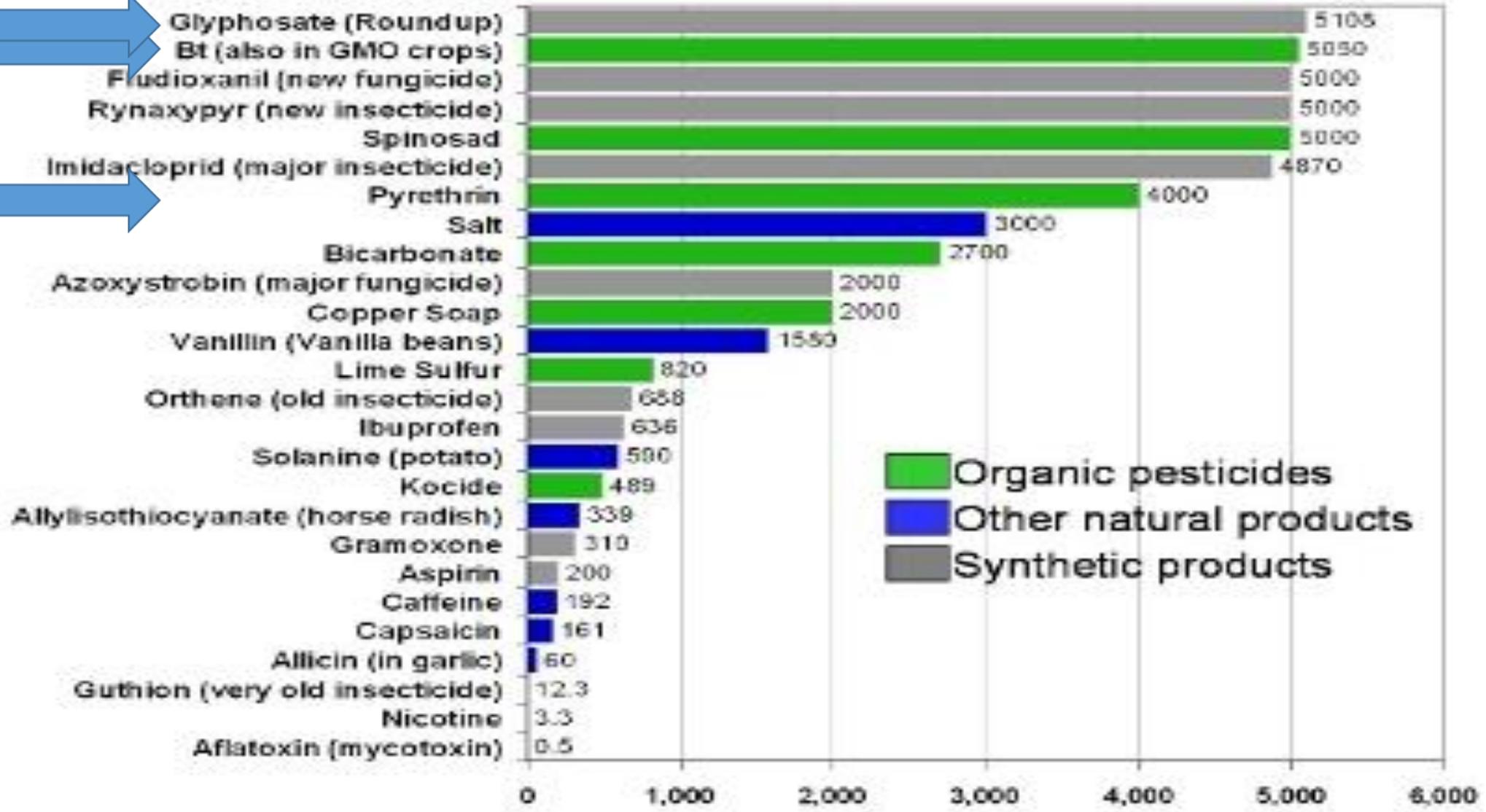
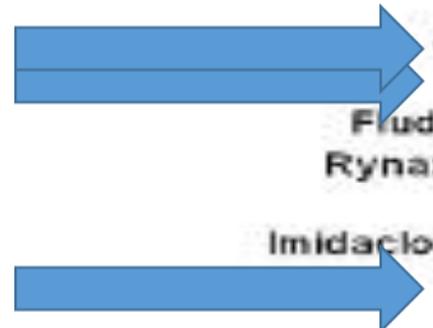
Organic because I want to avoid chemicals





More Toxic

Less Toxic



Organic pesticides
Other natural products
Synthetic products

Oral ALD50 (lower value more toxic)

Organic because it's not "genetically modified"



Virtually ALL food has been modified.



Genetic Engineering is nothing more than a progression
on plant breeding



Conventional Breeding

Cross pollination

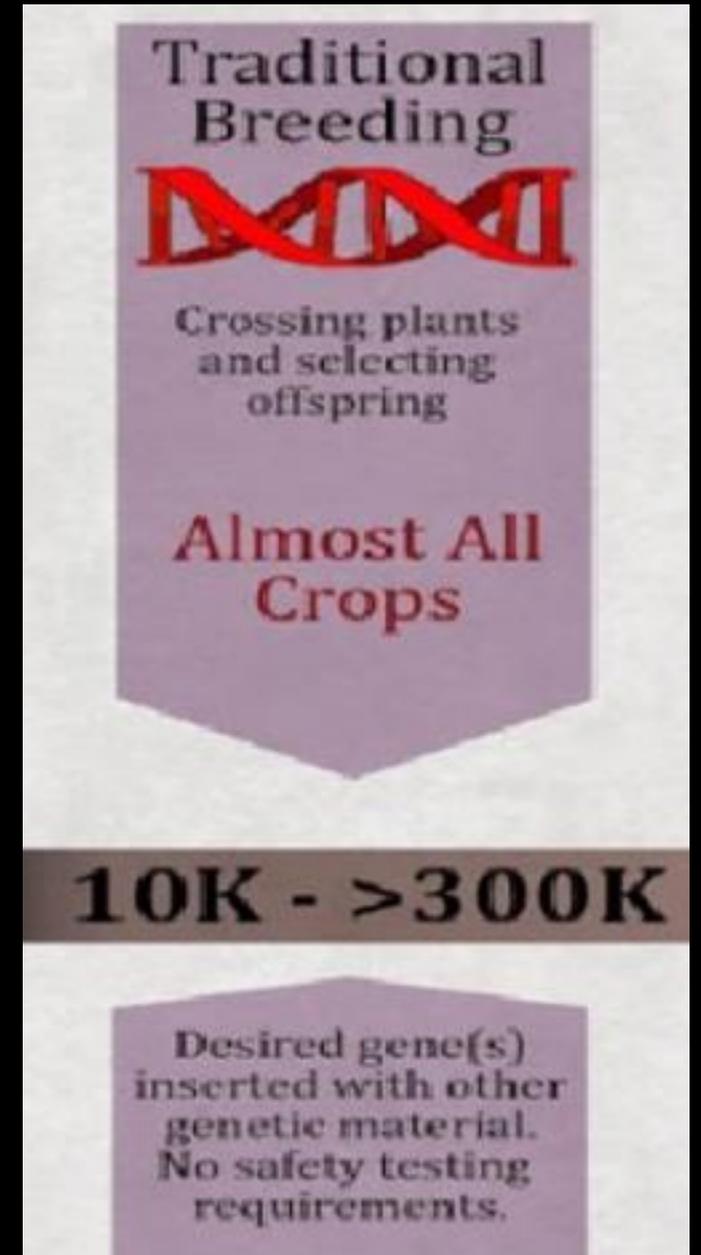
Hybridization

Takes years to
achieve the beneficial Trait

Thousands of genes affected

No safety testing

No long term studies



Mutagenesis

Bombardment with Nuclear Radiation
Submersion in Carcinogenic Chemicals

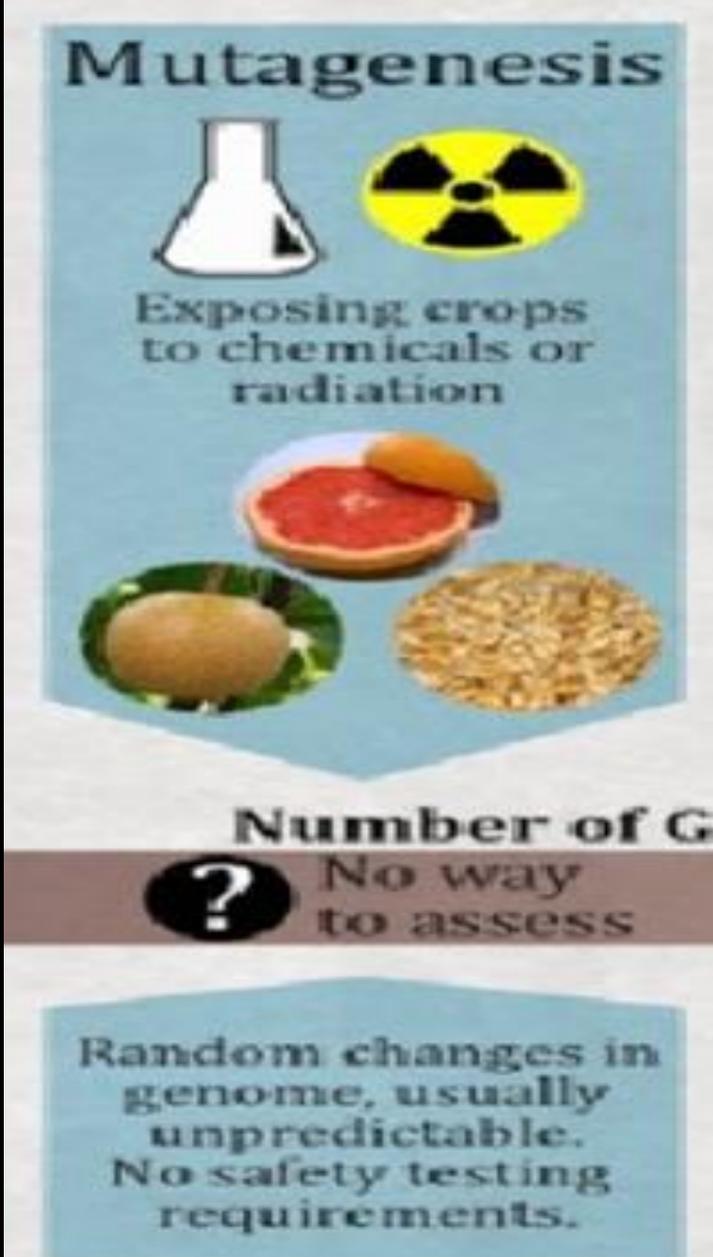
Rapid Mutation to induce beneficial trait(s)

No telling the number genes affected

No safety testing

No long term studies

Over 2,400 organic crops such as Rio Red Grapefruit originated this way



The infographic is titled "Mutagenesis" and is set against a light blue background. At the top, it features two icons: a white Erlenmeyer flask and a yellow radiation symbol. Below these icons, the text reads "Exposing crops to chemicals or radiation". In the center, there are three images of food: a whole orange, a sliced grapefruit, and a pile of grains. Below the food images, the text "Number of G" is partially visible. A dark grey horizontal band contains a white question mark in a black circle, followed by the text "No way to assess". At the bottom, a light blue box contains the text: "Random changes in genome, usually unpredictable. No safety testing requirements."

Mutagenesis

Exposing crops to chemicals or radiation

Number of G

? No way to assess

Random changes in genome, usually unpredictable. No safety testing requirements.

RNAi

Specific switching off of selected genes within the plant

Targeted gene silencing

Typically 1-2 genes affected

Extensive safety testing required for approval

Arctic Apples

RNA Interference

Switching off selected genes with RNA

es Affected
1-2

Targeted gene(s) switched off or 'silenced'. Safety testing required.

The infographic features a green background with a red RNA strand at the top. Below it, a corn cob, a plate of tomatoes, and a plate with an apple and banana slices are shown. A brown banner contains the text 'es Affected' and '1-2'. A green box at the bottom contains the text 'Targeted gene(s) switched off or 'silenced'. Safety testing required.'

Transgenics

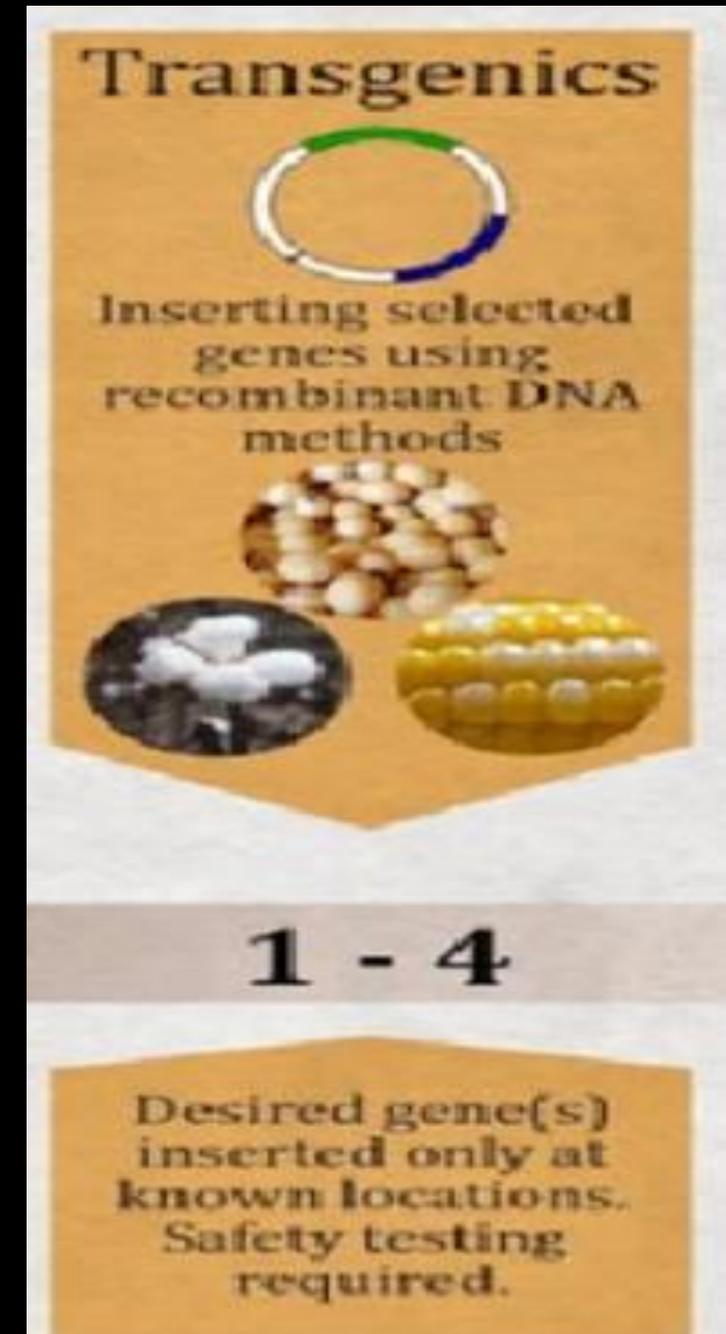
Specific insertion of desired genes from donor into host plant

Insertion is site specific

Typically 1-4 genes affected

Extensive safety testing required for approval

Bt Corn, Cotton, Soybean, Brinjal



Transgenics

Inserting selected genes using recombinant DNA methods

1 - 4

Desired gene(s) inserted only at known locations. Safety testing required.

Plant breeding technology has advanced more in the last 5 years than it has in the previous 5,000 years!

Genetic Engineering is an advancement of
the breeding process.

GMO is NOT an ingredient...it's a process.

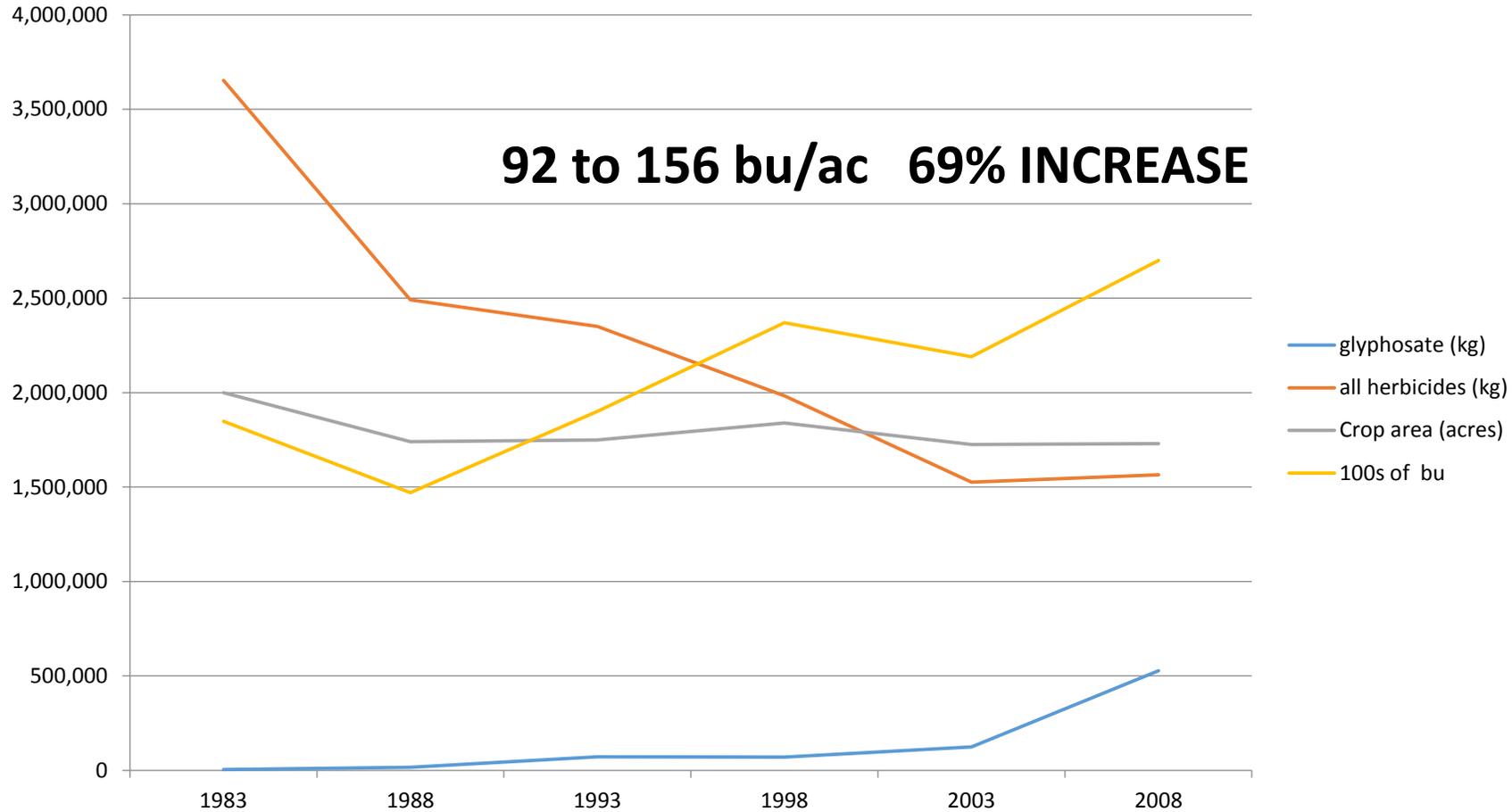
BIG Genetic Engineering Benefits

HT CANOLA Stats

- 53% reduction in herbicide use
- 55% reduction in producer exposure
- 1.3 Million Kg reduction in active ingredient (AI)
- Environmental Impact/Ha '95 – '06 down 37%
- Yields up from 21 bu/ac to 41 bu/ac (2012)
- Reduction in soil erosion 66%
- Reduction in Greenhouse Gas 26%
- Contribution to Canadian Economy >\$19B

HERBICIDES DOWN – CORN YIELDS UP

Ontario



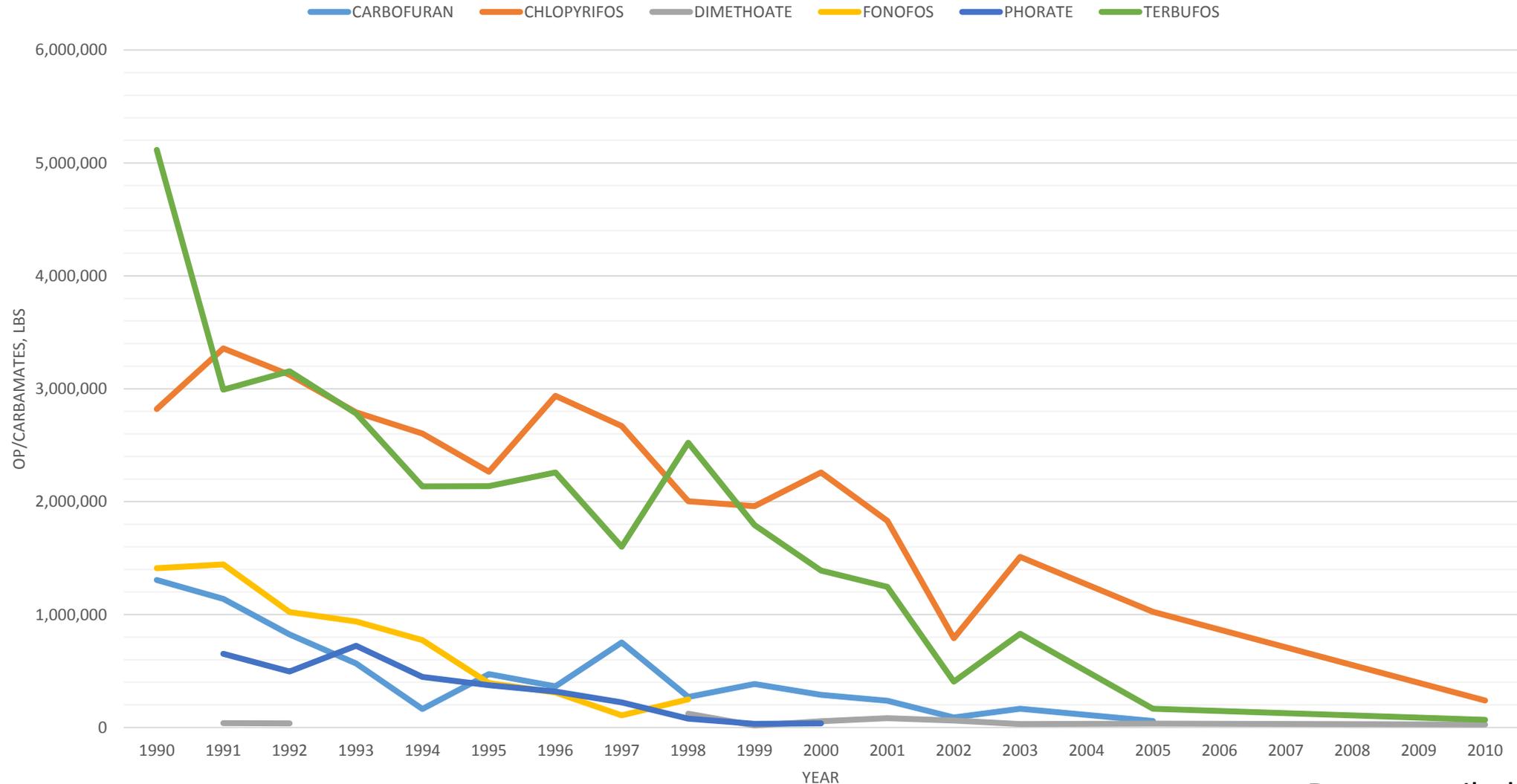
Herbicide usage from: <http://www.omafra.gov.on.ca/english/crops/facts/pesticide-use-appendix9.htm>

Crop area and yield from: http://www.omafra.gov.on.ca/english/stats/crops/estimate_hist_imp.htm#Grain Corn

INSECTICIDES WAY DOWN – TOXICTY LOAD WAY, WAY DOWN

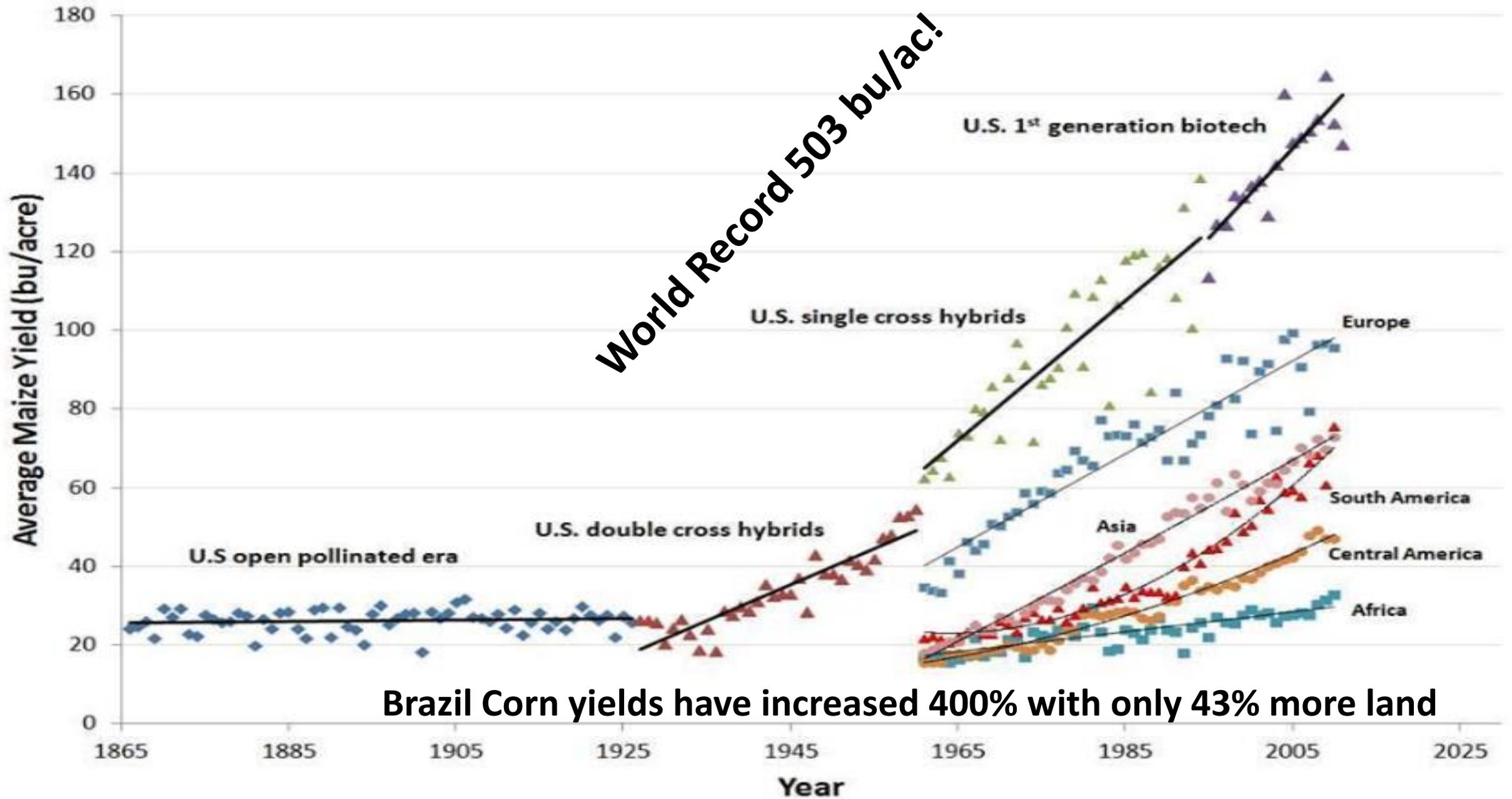
US CORN

CORN INSECTICIDES: OP/CARBAMATES



Data compiled by AGRI-TREND

Historic Corn Yield: Selected Regions



GMO technology in
Brazil is not resulting in the
destruction of the rainforest...

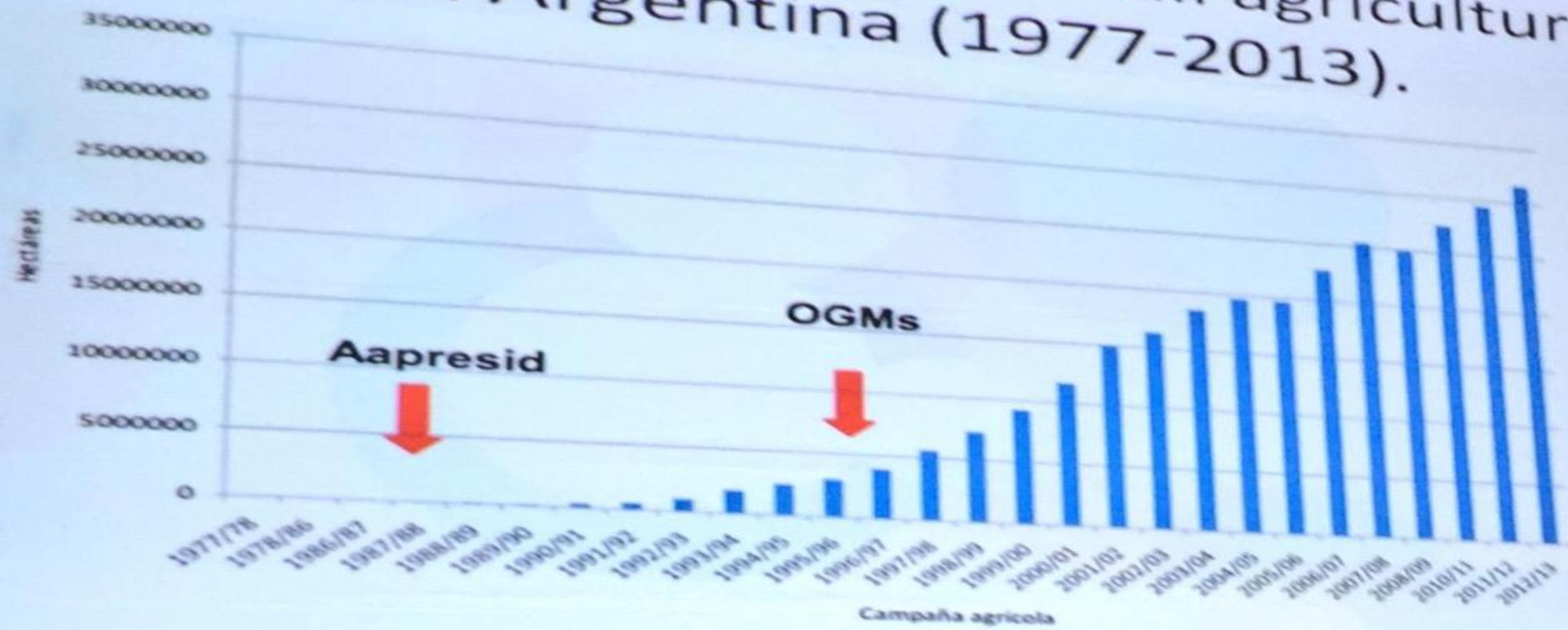
it is **SAVING** the rainforest.







Evolution of area of no-till agriculture in Argentina (1977-2013).



Fuente: Aapresid (2012) y BCBA (2013)

Will agriculture lose
significant science
to Non-Science?



GMO FREE

AN ORIGINAL  SERIES

FARMED AND DANGEROUS

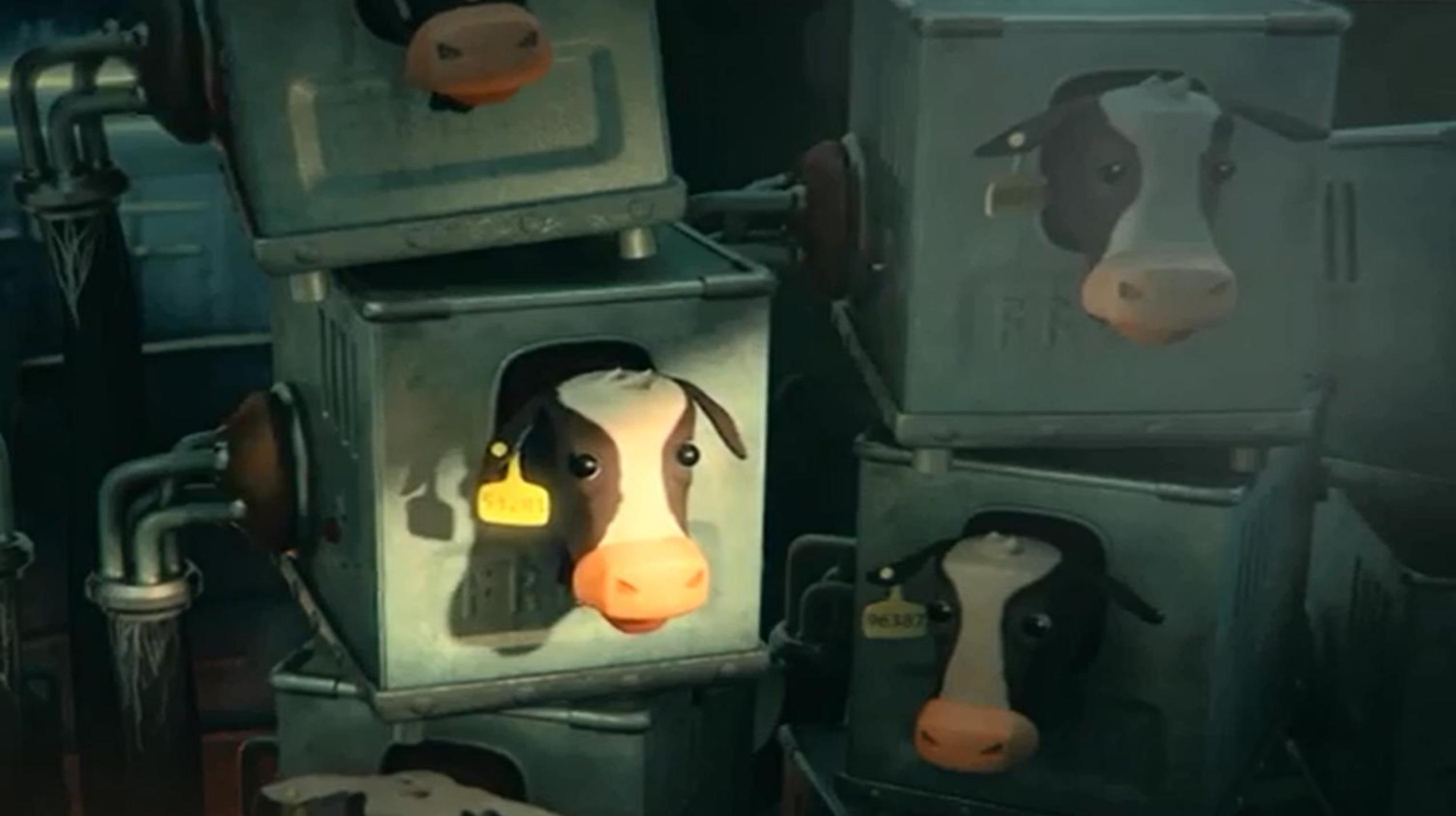
A BUMPER CROP OF LIES AND DECEIT



PREMIERES FEBRUARY 17TH

ON **hulu**

FARMEDANDDANGEROUS.COM



The game is to sell fear.

There is BIG MONEY IN SELLING FEAR!



GP Anti –GMO Movie

CONSUMED

a film by DARYL WEIN

- Consumed
- About the Film
- See the Film
- Cast/Crew

DW: Don't get us wrong. The film, while fictional, is heavily researched and supported by people like Michael Hansen, the senior scientist at Consumer's Union, Erin Brockovich, Gary Hirshberg at Just Label It, Food Democracy Now and the Organic Consumer's Organization. We wanted to make people aware that we are very responsible and thoughtful filmmakers who are putting ourselves out there with a message that's touching on real-world issues based in a lot of truth.



So, what are we going to do about it?

What am I GOING TO DO ABOUT IT?

NO GMO

KNOW GMO

It's time to

KNOW GMO

An uplifting discussion about food.



KNOW GMO

KNOW GMO – The Movie Project

- ✓ Full Feature Documentary
- ✓ Plus Vignettes

Concept

- ✓ Neutralize
- ✓ Educate
- ✓ Advocate

Business Plan

Tentative – Release Spring 2016



www.knowGMOtheMOVIE.com

United States

Argentina

Canada

Uganda

Hawaii

Kenya

Brazil

Support KNOW GMO Movie

KNOW GMO Preview

MAUI, Hawaii is GROUND ZERO





KNOW GMO

An uplifting discussion about food.

Robert Saik

Executive Producer

www.knowGMOtheMOIVE.com

If You've Ever Eaten Pizza Before, This Will Blow Your Mind (Maybe Literally)

By [Food Babe](#)

March 25, 2014

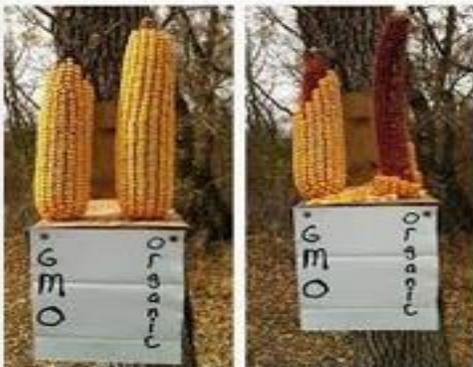
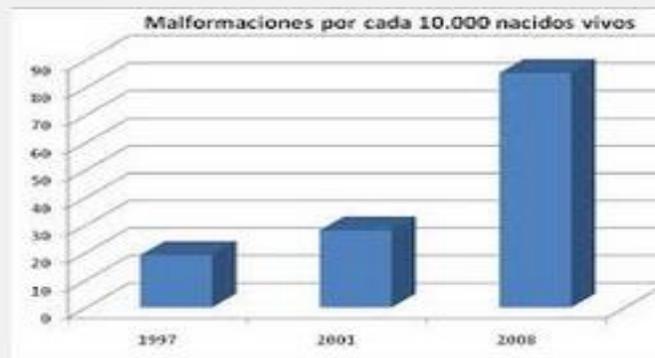
1,120 Comments

[Like](#) 445k [Tweet](#) [G+](#) 882

I love pizza! It's one of my top favorite foods next to kale and cake. And I know I'm not the only one that loves it, either. Recently, the [USDA conducted a study](#) which revealed the enormous amount of pizza we consume in the United States. American consumption of cheese increased by nearly 30% in 10 years because the dairy industry is spending big bucks to promote pizza and partner with big chains like Dominos. Congress even voted to declare pizza a vegetable in the school lunch program. The government wants us to eat pizza – a lot of it. But there's a lot going on behind closed doors that nobody wants us to know or talk about, and it all starts with the ingredients.

When I started researching pizza ingredients, one thing became abundantly clear. Pizza restaurants did not like the questions I was asking.





data. The average cancer deaths in the province is 158 per 100,000 individuals. And yet, four of the "Pampa Gringa" districts have much higher death rates — between 216 and 230. "Pampa Gringa" is considered the premier agricultural region of the Cordoba province.



The Report on Cancer in Cordoba 2004-2009 is the official investigation which links the use of pesticides — especially glyphosate — to the staggering increase in cancer deaths.

'Cancer cases are multiplying as never before in areas with massive use of pesticides'

"What we have complained about for years was confirmed and especially what doctors

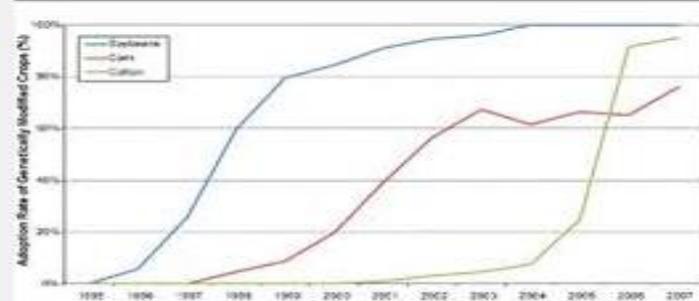


Figure 14.12. Adoption rates of genetically modified crops in Argentina, 1996-2007

Sources: Prepared using data from Trigo and Cap 2006; James 2006, 2007; and FAOSTAT.

STOP THE GLOBAL EXPANSION OF GMO ANIMAL FEED!

Major U.K. supermarkets have decided to allow genetically modified animal feed into their supply chain.

Research studies have found that GM DNA from animal feed is present in the milk and meat that we eat. This has been confirmed by the U.K. Government's Food Standards Agency. A recent study has also concluded that GM feed harms the health of pigs. Who wants to eat potentially sick animals?

DON'T LET THE AGRICHEMICAL CORPORATIONS TAINT EVEN MORE OF THE WORLD'S MEAT. SAY NO TODAY.

acton.org | greenaction.org | greenaction.org