Institute of Ag Professionals

Proceedings of the

2015 Minnesota Crop Production Retailers Plenary Session

Tuesday, December 8

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NO GMO
or
KNOW GMO

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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
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, 11:58 AM EST

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."

Photograph by Michael Nagle — Bloomberg/Getty Images
We’re just float’in down a river...
Our World

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

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)

2014:
- 204 million emails sent
- 3.3 million posts
- 4 million searches
- 1.4 million minutes voice calls
- 1.4 million tweets
- 216,000 photos
- 41,000 photos uploaded
- 120 hours video uploaded
- 72 hours videos uploaded
- 20 billion messages
- 347 posts
- 370,000 voice calls
- 98,000 tweets
- 3,480 photos
- 694,445 searches
- 2 million searches
- 168 million emails sent
- 1106 blog posts
- 31 billion messages
- 50 billion messages
- 342,000 tweets
- 1380 blog posts
- 278,000 tweets

Picture by Centre for Learning and Teaching
3rd November 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

- Systematic reviews
- Randomised controlled trials
- Cohort studies
- Case-control studies
- Case series, case reports
- Editorials, expert opinion
Figure 1. Levels of evidence

- Editorial, expert opinion
- Case series, case reports
- Case-control studies
- Cohort studies
- Randomised controlled trials
- Systematic reviews

"I just know"
Who’s in the driver’s seat?
Food Trends and Food “Experts”

Home Cooked Foods
Fermented Foods
Detox Diet
Mini Indulgences
Fat-Free Foods
Fuss-Free Food
Mexican Food
Bring Your Own Food
Paleolithic Diet
Comfort Foods
Raw Food
Organic Food
Gluten-free Food
The attack on Canola Oil

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

Processed To Death – Get These Cooking Oils Out of Your Pantry STAT!
<table>
<thead>
<tr>
<th>Food Policy</th>
<th>Support</th>
<th>Oppose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory country of origin labels for meat</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>A requirement that school lunches must contain 2 servings of fruit and vegetables</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>Mandatory labels on food produced with genetic engineering</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>Mandatory labels on foods containing DNA</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>Mandatory calorie labels on restaurant menus</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>Calorie limits for school lunches</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>A ban on the sale of raw, unpasteurized milk</td>
<td>62%</td>
<td>38%</td>
</tr>
<tr>
<td>A ban on the sale of food products made with transfat</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>A ban on the sale of marijuana</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>A tax on sugared sodas</td>
<td>67%</td>
<td>33%</td>
</tr>
</tbody>
</table>

SOURCE: Oklahoma State University Food Demand Survey, Jan. 16, 2015
80.44% say Food Containing DNA should be labeled.

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

- Mandatory country of origin labels for meat
- A requirement that school lunches must contain 2 servings of fruit and vegetables
- Mandatory labels on food produced with genetic engineering
- Mandatory labels on foods containing DNA
- Mandatory calorie labels on restaurant menus
- Calorie limits for school lunches
- A ban on the sale of raw, unpasteurized milk
- A ban on the sale of food products made with transfat
- A ban on the sale of marijuana
- A tax on sugared sodas

SOURCE: Oklahoma State University Food Demand Survey, Jan. 16, 2015
Awareness of Food Issues

Jason Lusk
BOUGHT
THE HIDDEN STORY
BEHIND VACCINES,
BIG PHARMA
AND YOUR FOOD.
Will agriculture be *ALLOWED* to feed 9 billion people?
What do all these people have in common?
We will need agriculture technology, including Genetic Engineering if we are going to maintain global food security.
Fanaticism is causing global suffering.

Genetic engineering could be a threat to human and environmental health.
Number of children under the age of 5 who **DIED** from Malnutrition (2013)

Economist Magazine – 2013 Statistics
3,100,000
Number of children who died from GMO

Economist Magazine – 2013 Statistics
Seems the LESS we spend on food the MORE TIME we spend complaining about it.

USA 6.8%
UK 8.9%
Canada 9.3%

Kenya 44.9%
Indonesia 44.1%
India 35.8%
Food Paranoia
a FIRST WORLD problem
Who is “Shilling” for Who?

**Whole Foods Market**

- 2014 – $14.2 Billion
- Their customers (the other 99%)
- Twitter – 4,600,000 Followers

**Monsanto**

- 2014 - $15.8 Billion
- Their customers (farmers ~ 1% pop.)
- Twitter – 69,000 Followers
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?
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?
WE ARE PROUD TO BE CERTIFIED ORGANIC

WE PROUDLY SUPPORT FAIRTRADE

ORGANIC POWDERED SUGAR

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!!

Explore the healthy world of Non-GMO
Label spin = $$$

GMO
Natural
Organic
only $7.99 per 3 oz
Organic because I want to avoid chemicals
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
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
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
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

92 to 156 bu/ac  69% INCREASE

Data compiled by AGRI-TREND

Crop area and yield from: http://www.omafra.gov.on.ca/english/stats/crops/estimate_hist_imp.htm#Grain Corn
INSECTICIDES WAY DOWN – TOXICITY LOAD WAY, WAY DOWN
US CORN

CORN INSECTICIDES: OP/CARBAMATES

Data compiled by AGRI-TREND
Brazil Corn yields have increased 400% with only 43% more land.
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).

- **Aapresid**
- **OGMs**

Will agriculture lose significant science to Non-Science?
CHIPOTLE MEXICAN GRILL

GMO FREE
AN ORIGINAL CHIPOTLE SERIES

FARMED AND DANGEROUS

A BUMPER CROP OF LIES AND DECEIT

PREMIERES FEBRUARY 17TH
ON hulu
The game is to sell fear.

There is BIG MONEY IN SELLING FEAR!
GP Anti – GMO Movie
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 – 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
If You’ve Ever Eaten Pizza Before, This Will Blow Your Mind (Maybe Literally)

By Food Babe

March 25, 2014

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 50% 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.