



# How to Talk to Your Neighbor About What You Do

Timothy Pastoor, PhD, DABT, ATS

Pastoor Science Communications, LLC



# First Round: Tough Questions In Difficult Situations

Situation	Question/Statement	Your Response
Social/One-on-One	GMO is bad and I will not eat food that is GMO!!!	
Social/One-on-One	Organic farming is better (safer) than conventional, right?	
Community Meeting	Are pesticides dangerous?	
Social Media: Twitter	Can't you grow food that's safe?	

# The ABCs of Science Communication

➤ Awareness



➤ Bridge



➤ Content

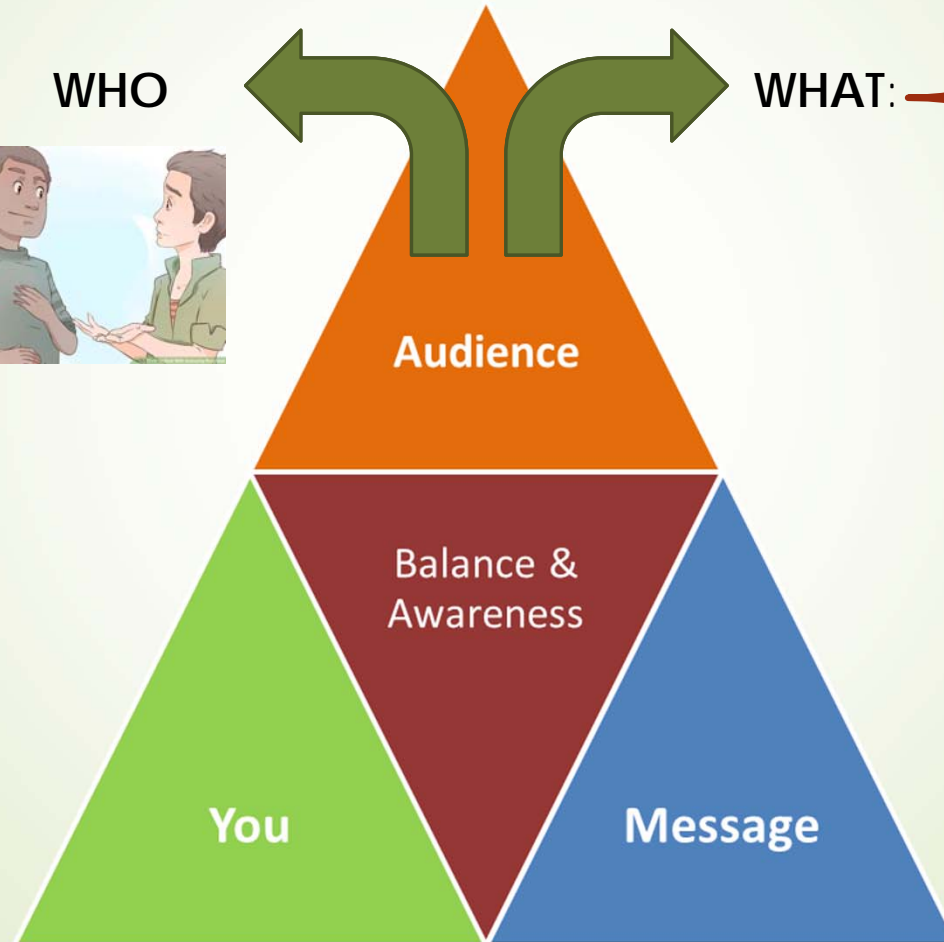
# Awareness



WHO



WHAT:



Know



Feel



Do



# Awareness: Audience Identification

Active

+

- Know
- **Feel**
- Do

- Know
- Feel
- **Do**



Supportive

+

Defuse  
Engage  
Avoid  
Inform

- **Know**
- Feel
- Do

Passive

-



Adversarial

-

# Awareness: Emotions

Active

+

- Concern
- Anger
- Fear
- Anxious
- ...

- Eager
- Willing
- Unsure
- ...



Supportive

+

Engage

Defuse

Inform

Avoid



Adversarial

-

Passive

-

# Bridging

Active

- I understand your concern...
- Maybe I can reassure you...
- Let's talk about that...
- ...

- Great point. Let me add to that...
- Glad you asked...
- Tell me more. I'm listening...
- ...



Adversarial



Supportive

Defuse  
Engage  
Avoid  
Inform

• Know

- Feel
- Do

Passive





# Bridging statements

## **Adversarial**

- I understand your concern...
- Have you thought about...
- Maybe I can reassure you...
- Let's talk about that...
- I can't speak to that, but what I can say is...
- I share your concern, but not your conclusions

## **Supportive**

- Great point. Let me add to that...
- Glad you asked...
- Tell me more. I'm listening...
- Let me build on that...





# The ABCs of Science Communication

➤ Awareness

➤ Bridge

➤ Content

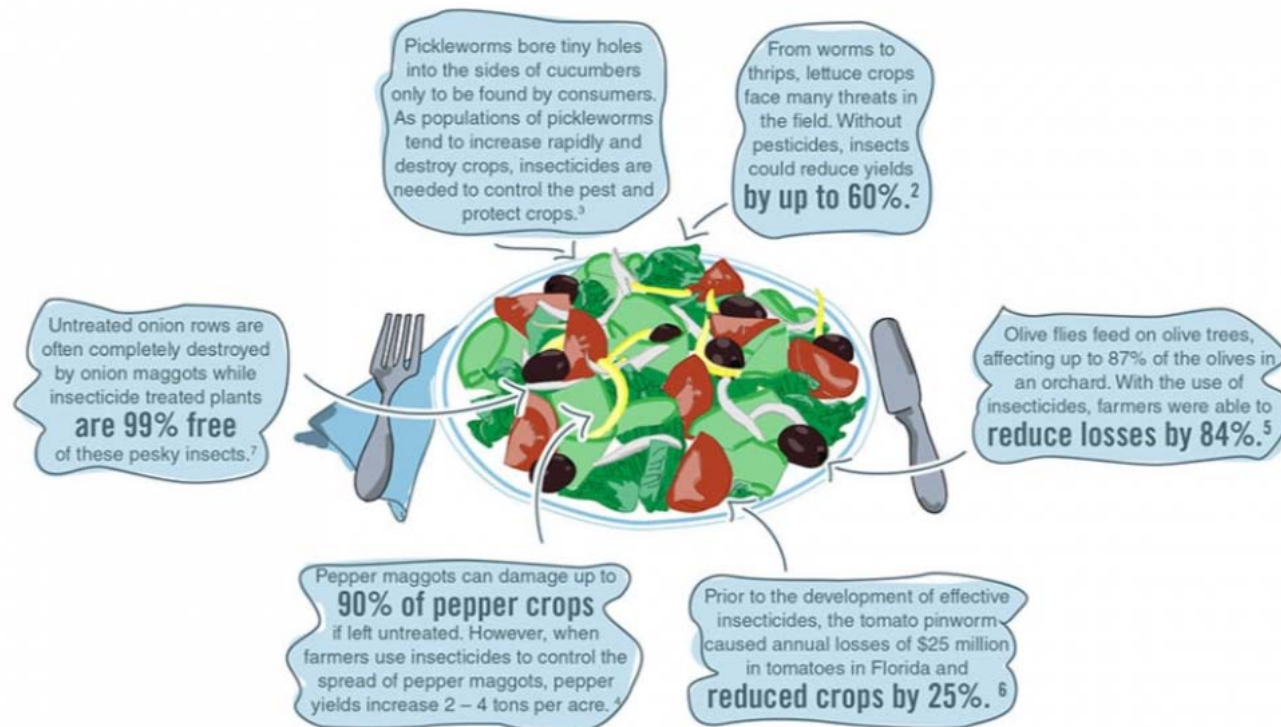
# Content sources

- [www.croplifeamerica.org](http://www.croplifeamerica.org)
- [www.GiveACrop.org](http://www.GiveACrop.org)
- [www.gmoanswers.com](http://www.gmoanswers.com)
- [www.knowgmo.ca](http://www.knowgmo.ca)
- [www.bio.org](http://www.bio.org)
- <http://www.geneticliteracyproject.org/>
- [www.epa.gov/pesticides](http://www.epa.gov/pesticides)
- <https://www.extension.purdue.edu/extmedia/ppp/ppp-70.pdf>

From: Bio.org

# Fresh is Best!

Fruit and vegetable consumption has been linked to many health benefits: the reduced risk of cancer, diabetes, cholesterol and heart disease; and savings in health care costs.<sup>1</sup> With the responsible use of today's agricultural tools such as pesticides, farmers are able to grow the healthy crops you and your family need to lead a healthy life.



<sup>1</sup>[http://www.who.int/elena/titles/bbc/fruit\\_vegetables\\_ncds/en/](http://www.who.int/elena/titles/bbc/fruit_vegetables_ncds/en/)

<sup>2</sup>[https://croplifefoundation.files.wordpress.com/2012/07/combined\\_document\\_lettuce.pdf](https://croplifefoundation.files.wordpress.com/2012/07/combined_document_lettuce.pdf)

<sup>3</sup><https://croplifefoundation.files.wordpress.com/2012/07/30-cucumbers.pdf>

<sup>4</sup>[https://croplifefoundation.files.wordpress.com/2012/07/combined\\_document\\_sweet\\_peppers.pdf](https://croplifefoundation.files.wordpress.com/2012/07/combined_document_sweet_peppers.pdf)

<sup>5</sup>[https://croplifefoundation.files.wordpress.com/2012/07/combined\\_document\\_olives.pdf](https://croplifefoundation.files.wordpress.com/2012/07/combined_document_olives.pdf)

<sup>6</sup>[https://croplifefoundation.files.wordpress.com/2012/07/combined\\_document\\_tomato.pdf](https://croplifefoundation.files.wordpress.com/2012/07/combined_document_tomato.pdf)

<sup>7</sup>[https://croplifefoundation.files.wordpress.com/2012/07/combined\\_document\\_onions.pdf](https://croplifefoundation.files.wordpress.com/2012/07/combined_document_onions.pdf)

# From Bio.org



According to the UN Food and Agricultural Organization,

**20-40%**

of crops are lost each year to pests and disease.<sup>1</sup>

Fungicides, herbicides, insecticides, and other crop protection tools help growers reduce food loss starting on the farm.

The stronger the produce, without bug bites, mold or other damage...

The more likely it reaches a grocery store and consumers choose to purchase it.

## How Much Do Crop Protection Products Help Farmers Increase Yields?

By mitigating the effects of crop feeding insects, U.S. farmers produce 144 billion pounds of additional food, feed, and fiber and reap \$22.9 billion in farm income increases.<sup>2</sup>



**Food**



**Feed**

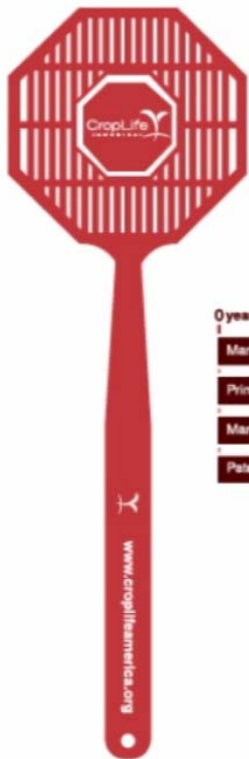


**Fiber**

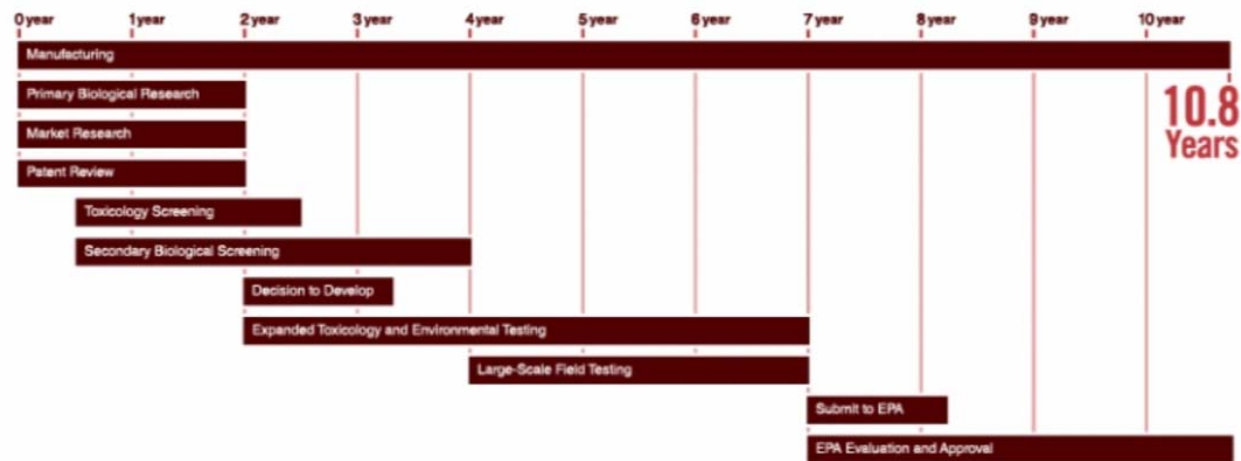
For every dollar spent on fungicides and their application, U.S. growers gain \$14.60 in increased production value.<sup>3</sup>



# #ScienceOrSwat



The discovery and development of a new crop protection product can cost up to **\$286 million<sup>1</sup>**...



Hundreds of tests and years of development help ensure that new registered products lead to an affordable, healthy and sustainable food supply.

<sup>1</sup> Agrochemical Research and development: The Cost of New Product Discovery, Development and Registration | Industry R&D expenditure in 2014 and expectations for 2019. Study completed by Phillips McDougall in 2016. Learn more about crop protection at [www.CropLifeAmerica.org](http://www.CropLifeAmerica.org)

From  
GMOanswers.com

# Are GMOs **SAFE?** **YES.** The National Academies of Sciences, Engineering, and Medicine 2016 report reaffirms

Over  
**900** studies and publications were examined



**20+** scientists, researchers and agricultural and industry experts over a 2 year period reviewed animal studies, allergenicity testing, North American and European health data, and more



years of data since GMO crops were introduced

# SAFE.



No substantiated evidence of a difference in risks to human health between current commercially available genetically engineered [GMO] crops and conventionally bred crops.

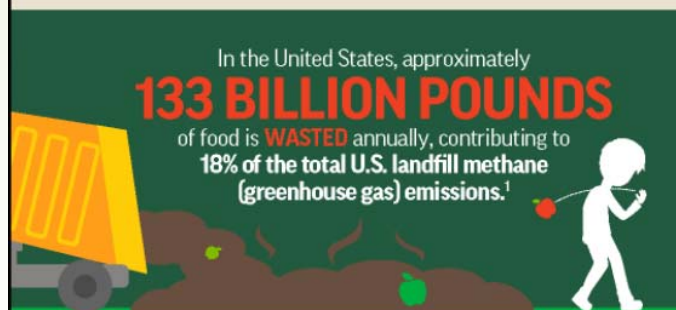
*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

Full report available at <http://nas-sites.org/ge-crops/>



From:  
GMOanswers.com

# How GMOs Help Reduce FOOD WASTE & LOSS



**GM APPLES ARE  
NON-BROWNING,  
ELIMINATING  
THOSE  
SUPERFICIAL  
ISSUES** that cause  
people to  
unnecessarily  
throw them away.<sup>2</sup>

In 2010,  
each  
American  
on  
average

**THREW AWAY**



totaling  
1.7 billion  
pounds of  
food waste.<sup>4</sup>

**GM POTATOES  
ARE LESS PRONE  
TO BRUISING  
AND BLACK  
SPOTS,** meaning  
fewer potatoes  
will end up  
in landfills.



**GMOs help farmers  
minimize these losses  
and grow more food  
using less land.**

In 2015, GMOs enabled farmers  
to use 48.2 million less acres of  
land to produce the same  
amount of crops<sup>7</sup>—equivalent to  
nearly four times the size of  
America's largest national park,  
Wrangell-St. Elias National  
Park and Preserve.<sup>8</sup>



**20 - 25%**

of all crop yields in  
the U.S. are **LOST** to  
pests, crop diseases, or  
post-harvest losses. In the  
developing world, it's as  
high as 40 - 50%.<sup>9</sup>



<sup>1</sup> America's Food Waste Problem (2010). Retrieved from <https://www.epa.gov/science/nature/americas-food-waste-problem>

<sup>2</sup> Arctic Apple Benefits. Retrieved from <http://www.arcticapples.com/arctic-apples/arctic-apples-benefits/>

<sup>3</sup> Smithsonian: This Is How Much Water You Waste When You Throw Away Food (2015). Retrieved from <http://www.southampton.gov.uk/science/nature/how-much-water-you-throw-away-food-waste-water-too-100657238/2015/>

<sup>4</sup> U.S. Census Bureau Announces 2010 Census Population Counts - Appointments Counts Delivered to President. Retrieved from <https://web.archive.org/web/20101027044247/http://2010.census.gov/news/releases/archives/c10.c10.html>

<sup>5</sup> Halterman, D., Guenther, J., Collings, S. et al. Biotech Potatoes in the 21st Century: 20 Years Since the First Biotech Potato (2016). Retrieved from: <http://link.springer.com/article/10.1007/s12220-015-9495-1>

<sup>6</sup> All You Need to Know about the Eiffel Tower. Retrieved from <http://www.tourneiffel.com/visiter/2014/01/01/you-need-to-know-about-the-eiffel-tower.pdf>

<sup>7</sup> Brookes, G. and Barfoot, P. (2017). GM crops: global socio-economic and environmental impacts 1996 - 2015. Retrieved from <http://www.gpacconomics.co.uk>

<sup>8</sup> National Park Service: Frequently Asked Questions. Retrieved from <https://www.nps.gov/askabout/index.htm>

<sup>9</sup> Global Scientists Meet for Integrated Pest Management Idea Sharing (2015). Retrieved from <https://thefood.gov/blog/global-scientists-meet-integrated-pest-management-idea-sharing>





# The “go-to” areas for content

## Benefits



## What we know





# Content: General

## Benefits

- Feed 9 billion people by 2050
- More food from less land with less water
- Safe and affordable food
- Reduce food waste

Example: When catastrophic natural disasters strike suddenly, such as the 2004 Asian Tsunami or the 2005 Kashmir Earthquake, the U.S. is a first responder in relief efforts. Why? A major reason is that our agricultural producers are so efficient and our country has an abundant and safe food supply.

## What we know

- 1/3 of crops would be lost to pests
- Pesticides are extremely well regulated – like pharmaceuticals
- Each product must be registered by the Federal and State governments
- Any substance can cause an adverse effect. Pesticides are tested and regulated to avoid adverse effects.



# Content: GMO

## Benefits

- Faster way to find better hybrids
- A moral imperative, given the growing population and resource demands.
- Holds the promise for higher nutrition
- Reduce or eliminate allergens (e.g. peanut)

## What we know

1. is **equivalent** to conventional or organically grown food.
2. is extremely **well tested** and reviewed.
3. has been **endorsed** by major global science organizations.
  - Declared by 10 scientific organizations to be a safe technology

# Content: Organic vs Conventional

## Benefits

- Organic cannot feed the world
- Cost and yield much better with conventional
- True organic growing is labor intensive.
  - ~2% of US population produces food

## What we know

- Residue limits are carefully set at low and protective levels
- Residues are low or non-existent
- Organic uses pesticides (~20 synthetic)
- Organic is a marketing ploy
- Organic and conventional have same nutritional content



# From Amy Hays...

Silent

**Together We Can!**

Boomers

**You Matter**

GenX

**Prove It**

Millennials

**Big Picture**

# Communicating across generations

Age-Group	Orientation	Viewpoint	Your approach
Traditionalist	Together we can...	We will starve	...we can produce enough...
Boomer	You Matter	I will starve	Safe, affordable food for you and your family
Gen X	Prove It	Who says I'll starve	Well studied, carefully regulated
Gen Y/ Millennials	Big Picture	I'm fine and I'll figure it out	Let's work together to do what needs to be done.



## Second Round: Tough Questions In Difficult Situations

Situation	Question/Statement	Your Response
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# Panel

- Set situation (one-on-one; community meeting, etc)
- Decide adversarial or supportive
- Panels pose and react to questions or statements