



# Weighing Benefits vs Risks of Pesticides in Addressing Food Needs

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# Overview

- Current Scale
- Risks
- Perception
- Opportunities
- Considerations



# Current Situation

Benefits of Pesticides	Problems with Pesticides
Increased Food Supply	Can move from intended target location
Combat pests	Can kill pests non-target organisms
Prevent diseases	Science can be hard to explain to public
Increase profits for farmers	Perceived as harmful to humans
Lower labor cost on farm	Resistance occurs
Save time for farmer	Others?
Thoroughly tested/known behavior	
Protect homes/structures	
Aid in erosion control; no-till	
Efficient use of farm land preserves wildlife lands	
Protect public health	
Increase bee health; Varoa mites	
Provides food security	

# Risk of Pesticide Use

## the **Automobile Analogy:** Reducing Risk



<b>RISKS</b>	<b>HOW REDUCED</b>
Causes air pollution	① Burn cleaner fuel
Depletes natural resources	② Use renewable resources and recycling
Produces toxic gases	③ Install anti-smog devices
Susceptible to loss of control and damage	④ Engineer to handle better
Injurious to passengers in crashes	⑤ Equip with safety belts and airbags
Dangerous when driven recklessly	⑥ Enforce traffic laws

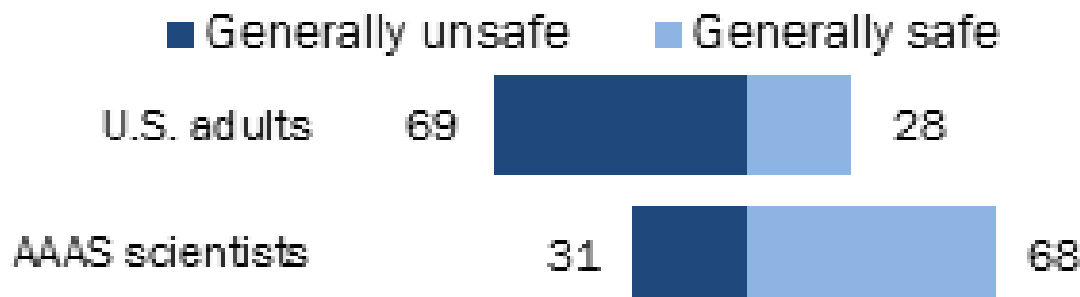
Source: Purdue

# Perception



## Eating Foods Grown with Pesticides

*% of each group saying it is generally safe or unsafe to eat foods grown with pesticides*



Survey of U.S. adults August 15-25, 2014. Q35. AAAS scientists survey Sept. 11 - Oct. 13, 2014. Q27 Those saying don't know or giving no answer are not shown.

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# Opportunities

How to change pesticide perception?

*“Better understanding of the general uncertainties surrounding development, regulation and use of pesticides would probably have substantial benefits.”*

Robert Krieger, Extension Toxicologist, University of California, Riverside and winner of the American Chemical Society's International Award for Research in Agrochemicals at the 229th National Meeting March 13 – 17, 2005 in San Diego, California

# What Do You Think Can or Should Be Done?

**What  
do you  
think**



# References

- <https://www.extension.purdue.edu/extmedia/ppp/ppp-70.pdf>
- [http://www.pewinternet.org/2015/01/29/public-and-scientists-views-on-science-and-society/pi\\_2015-01-29\\_science-and-society-03-06/](http://www.pewinternet.org/2015/01/29/public-and-scientists-views-on-science-and-society/pi_2015-01-29_science-and-society-03-06/)
- <http://faculty.ucr.edu/~krieger/publications/pesticide%20perceptions.pdf>