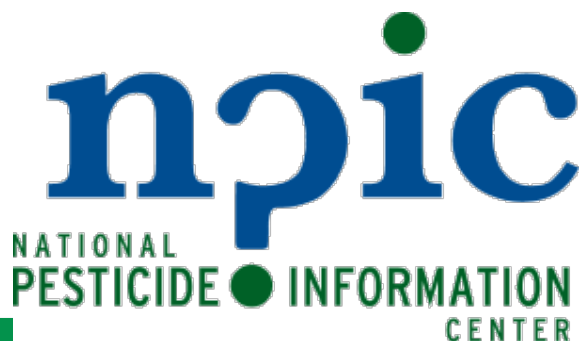


Risk Communication

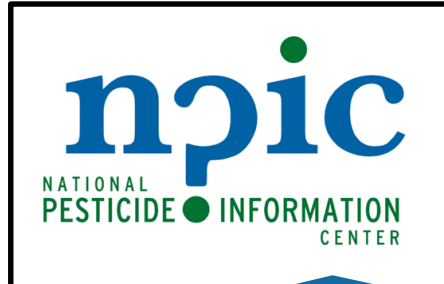
at the
National Pesticide Information Center
(NPIC)

Amy Cross, MS
Project Coordinator



Oregon State
University

Today's Topics



Who is NPIC?



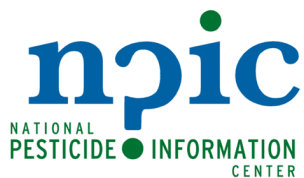
Why "Risk"



Elements of Risk
Communication



Putting it all
together



Who is NPIC?

An objective information service for pesticides

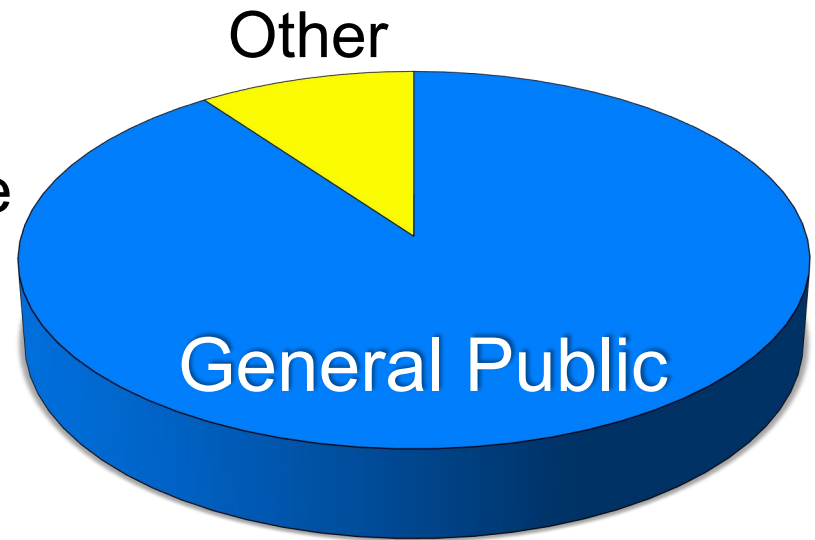


Toll-free phone service:
Mon - Fri, 8am to 12pm



Oregon State
University

- About 10,000 questions/year
- Most questions about pesticide use in and around home
- ~15% = pesticide incidents



Translate technical jargon

Connect people with local
resources

Multiple Languages

**Evaluate and
Communicate Risk**



Pesticide Specialists can address:

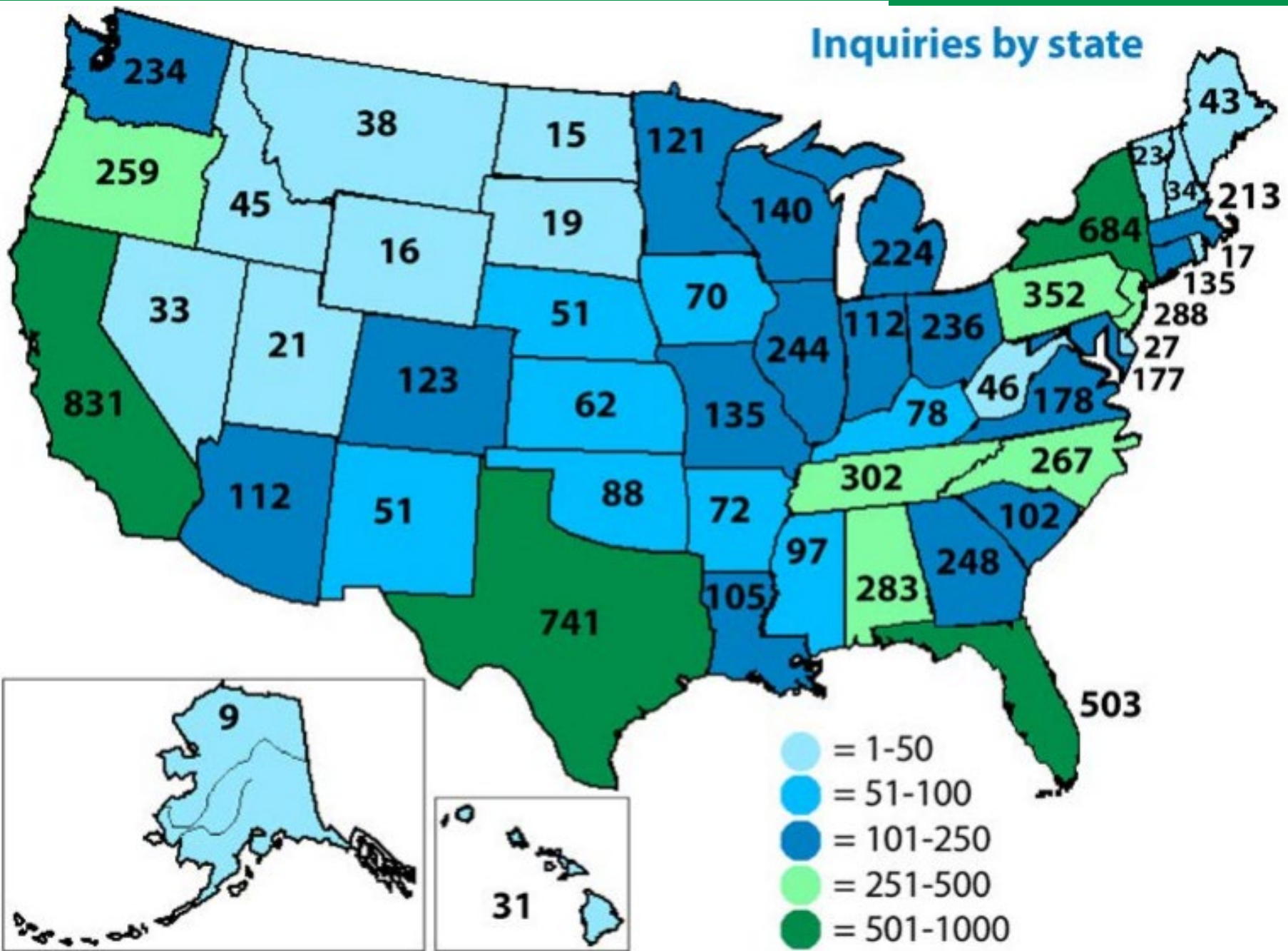
- ✓ Concerns from past or chronic exposures
- ✓ Concerns about upcoming treatments
- ✓ Chemical properties of pesticides
- ✓ Risks to animals or the environment
- ✓ Other non-urgent situations, pest IPM



NPIC cannot provide:

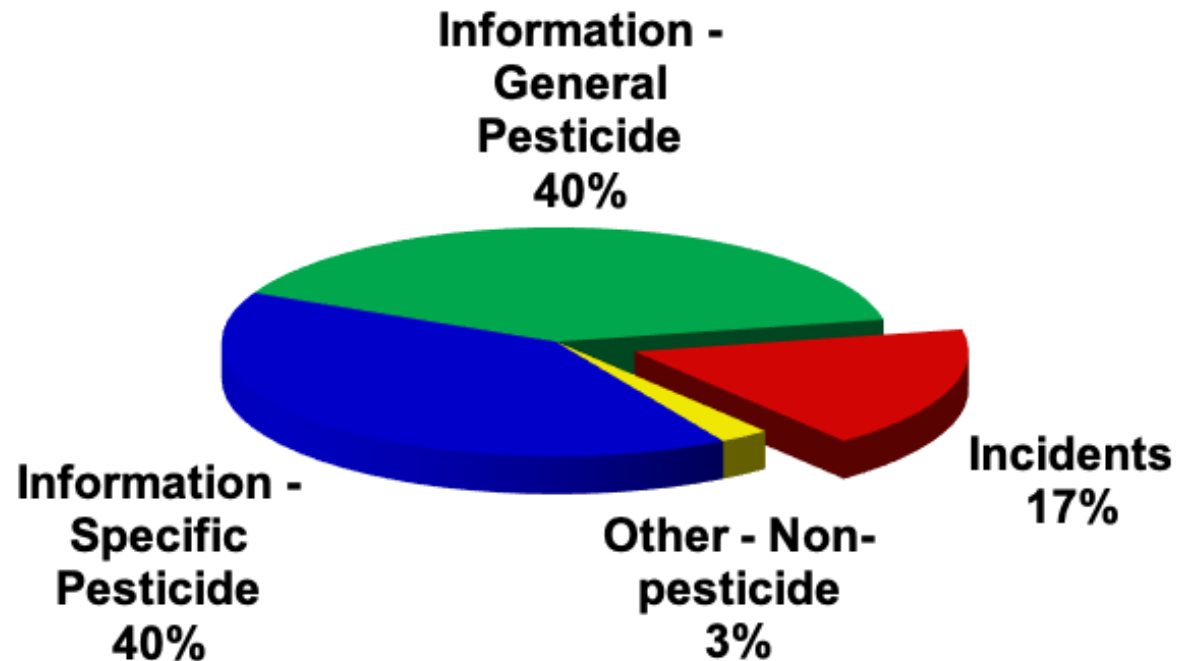
- Mixing or application instructions
- Product recommendations
- Medical advice or diagnoses
- Legal advice
- Automatic reporting to regulatory authorities

Inquiries by state



2018 Inquiry Highlights

Total Inquiries:
10,350



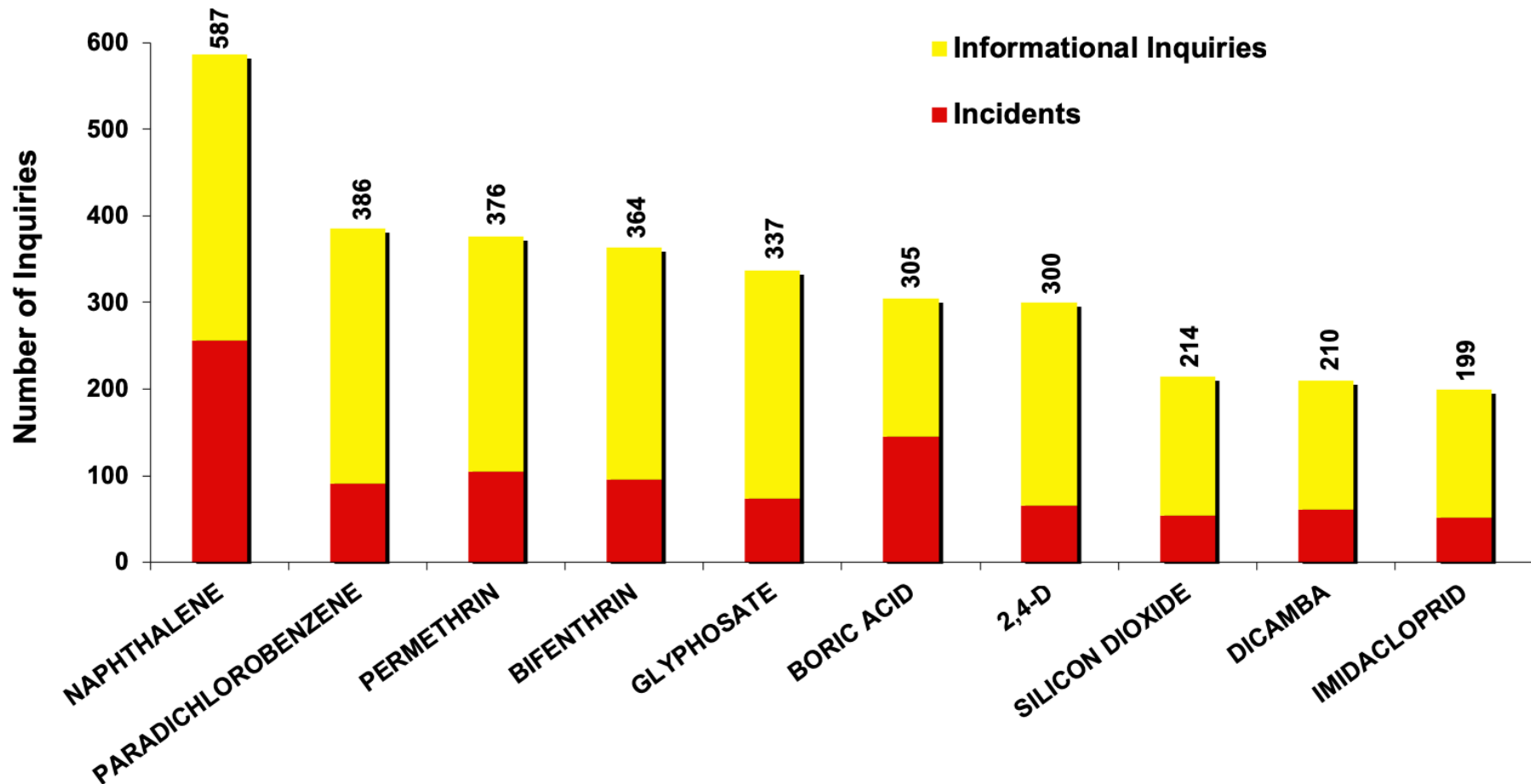
28% questions about **health concerns**

11% questions about **pests**

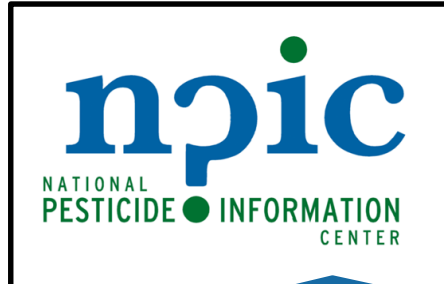
10% questions about **application & safety**

9% questions about **regulation**

Most common AIs in NPIC inquiries



Today's Topics



Who is NPIC?



Why "Risk"



Elements of Risk
Communication



Putting it all
together

Two Types of Pest Control

Do It Yourself



Hired



Two Types of Pest Control

Do It Yourself

Hired

Is it
“Safe”?



Safe?



Not Safe?



Risk

- **Toxicity/Dose**
- How to minimize **exposure**



Why Risk?

Safety

Yes or No

No precautions necessary

Safe is safe for everyone

Easy to explain

Risk

More risky<----->Less risky

Precautions reduce risk

Risk is higher for certain people

Harder to explain



Risk vs. Hazard

Why is it important?

Hazard or Risk?





Hazard or Risk?



Risk or Hazard?



Hazard or Risk?



Hazard or Risk?



Hazard vs. Risk

Hazard:

Potential source of harm, if enough interaction

“Can it?”

(individual level)

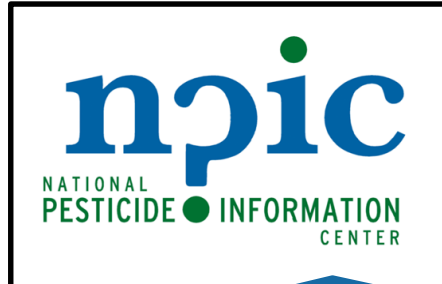
Risk:

Likelihood of harm resulting from specific interaction

“Will it?”

(population level)

Today's Topics



Who is NPIC?



Why "Risk"



Elements of Risk
Communication



Putting it all
together

Risk Perception

Every person is unique
Every hazard is unique

Acknowledgement: Dr. Paul Slovic, University of Oregon

How we perceive risk...

- It's personal
- It's quick: intuition, instinct, and emotion
- We make assumptions and subjective judgments
- Feelings about *outcomes* and *probabilities* are often confused → **probability neglect**

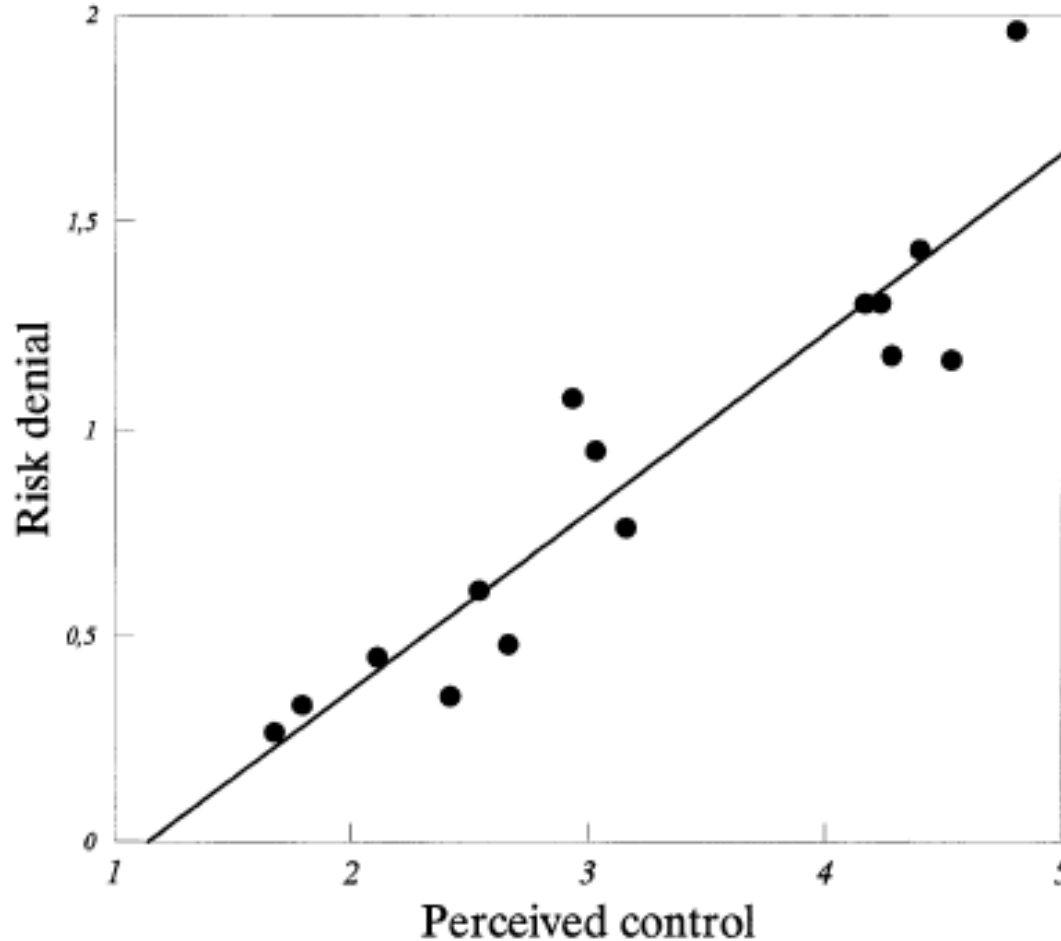




Risks are less likely to be acceptable if:

- Benefits hidden
- Benefits not fairly distributed among those who bear the risks

Risk denial increases with perceived control



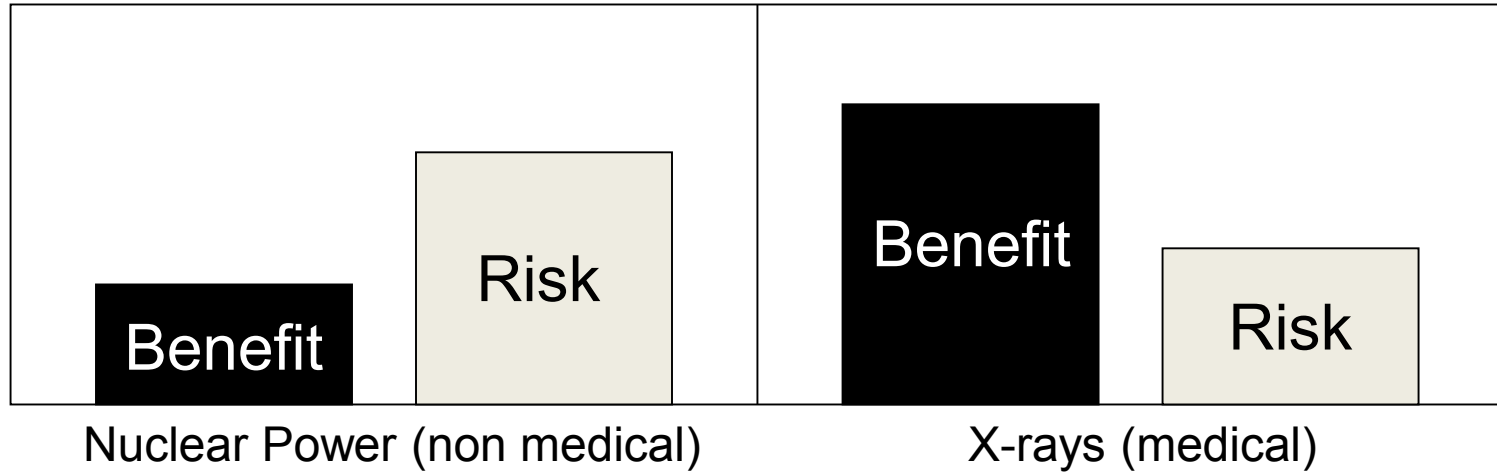
High Risk/
Benefit



Low Risk/
Benefit

5
4
3
2
1

Radiation



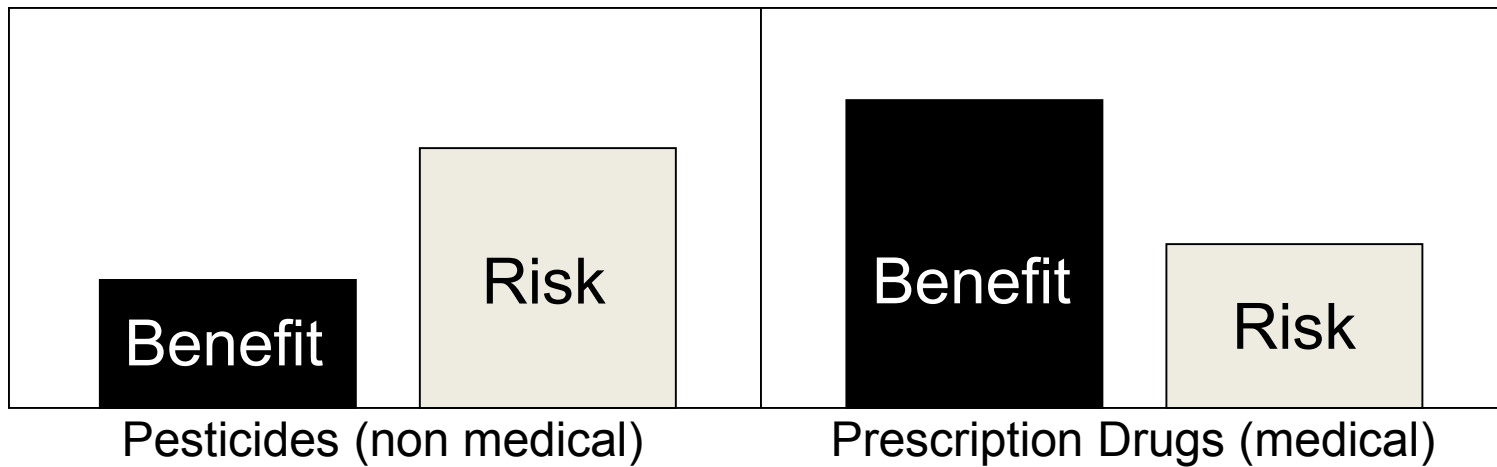
High Risk/
Benefit



Low Risk/
Benefit

5
4
3
2
1

Chemicals



Personal "Outrage" Factors

Higher risk
perceived

In person's control ----- Out of person's control

Voluntary ----- Imposed

Beneficial ----- Not beneficial

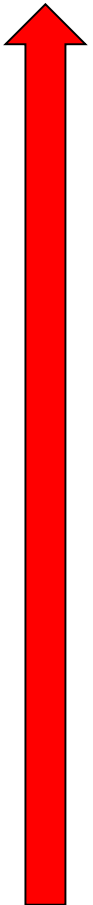
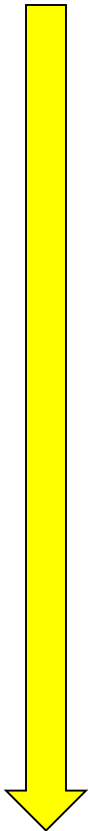
Natural ----- Man-made

Affects only adults ----- Affects children

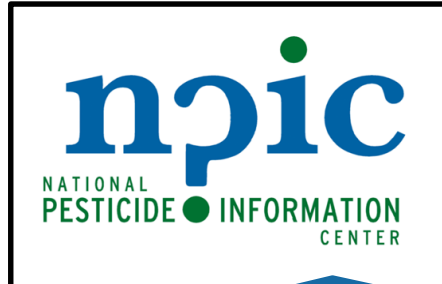
Familiar ----- Exotic

Trusted entity ----- Untrusted entity

Lower risk
perceived



Today's Topics



Who is NPIC?



Why "Risk"



Elements of Risk
Communication



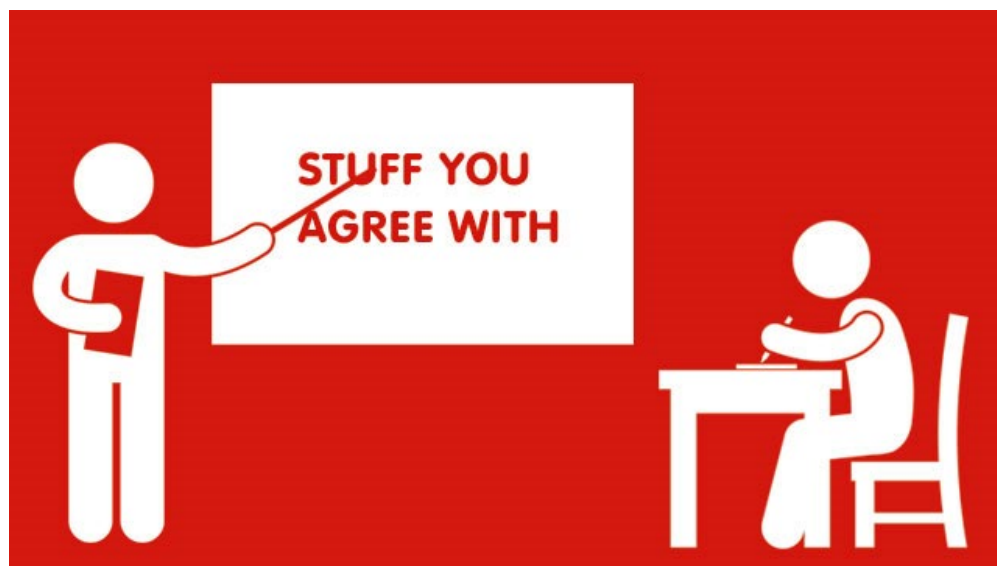
Putting it all
together

NPIC Mission:

To serve as a **factual source of information** for diverse professional and public audiences on pesticide-related issues.

Unintentionally biased?

- Subject order
- Topic emphasis
- Topic speed



When people experience social pain,
their IQ is decreased

- Embarrassment,
shame
- Disappointment,
anger



- **Check your personal opinions at the door.**
- Set the tone. Alarmed or calm?
- Ask questions and listen, build a picture.
- Choose words that reflect uncertainty when appropriate. Use words like **'may'**, **'might have'**, **'could have'**, etc.



L E A P over the Barriers

1. Listen
2. Empathize
3. Apologize
4. Problem-Solve



You cannot underestimate the importance of this step!



DO NOT:

Problem-solve

**Plan your
response**

Give advice

**Be or appear
rushed**

DO:

Be attentive

Be respectful

**Withhold
judgment**

**Ask brief
questions**

L E A P over the Barriers

1. Listen
2. Empathize
3. Apologize
4. Problem-Solve



These do not
imply agreement,
if done correctly

I'm sorry that happened, it must be frustrating.
I'm sorry to hear that. I'm an animal-lover too.
I have asthma, so I know what that's like.

Active Listening Checklist

- Minimal encouragements
- Paraphrasing
- Mirroring/Reflecting (repeat last words)
- Emotion Labeling (emotion naming)
- Open-ended questions
- "I" messages
- Effective pauses/silence

Responding to Misinformation

MYTH
FACT FACT FACT
FACT FACT FACT
FACT FACT FACT
FACT FACT FACT



MYTH
FACT
FACT
FACT

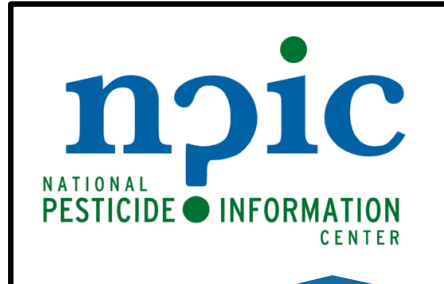


1. Focus on **core facts** - avoid myth familiarization
2. Explicit **warnings** if discussing a myth (= false)
3. Include an **alternative explanation** that accounts for important qualities in the original misinformation.

What else can neuroscience tell us?

- The brain wanders about 30% of the time.
- People tend to internalize the most dominant emotion in the room.
- Reading overcomes listening, even if you try to do both.
- People learn best in 20-minute chunks.
- To maximize learning, use **stories** that are tangible, relatable, and emotional. This strategy turns **information** into a life **experience**.

Today's Topics



Who is NPIC?



Why "Risk"



Elements of Risk
Communication



Putting it all
together

Risk Communication Checklist

- ✓ Listen, ask questions, paraphrase their concerns
- ✓ Frame your response as “risk” rather than “safety”
- ✓ Toxicity information – Signal word? More?
- ✓ Exposure information – ways to reduce exposure
- ✓ Benefit(s) of the application, when applicable
- ✓ Action items within their control
- ✓ Where to get more info – is there a better contact?

Example Inquiry

A homeowner has questions about safety regarding future treatment of her lawn for weeds. She is pregnant and has children.





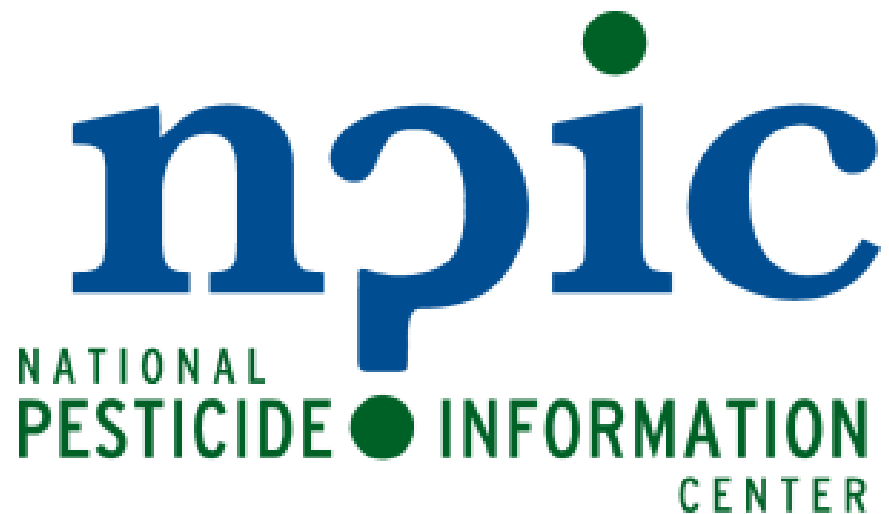
Example Inquiry

A homeowner has questions about safety regarding future treatment of her lawn for weeds. She is pregnant and has children.

Conversation – Don't assume, ask!

- Previous concern?
- Product-specific precautions
- AI toxicity
- Risk = Toxicity x Exposure
- Ways to minimize exposure
- Physician or Mother To Baby - OTIS





npic
NATIONAL
PESTICIDE ● INFORMATION
CENTER



800-858-7378

Mon-Fri 8:00-12:00



NPIC@ace.orst.edu



NPIC.orst.edu

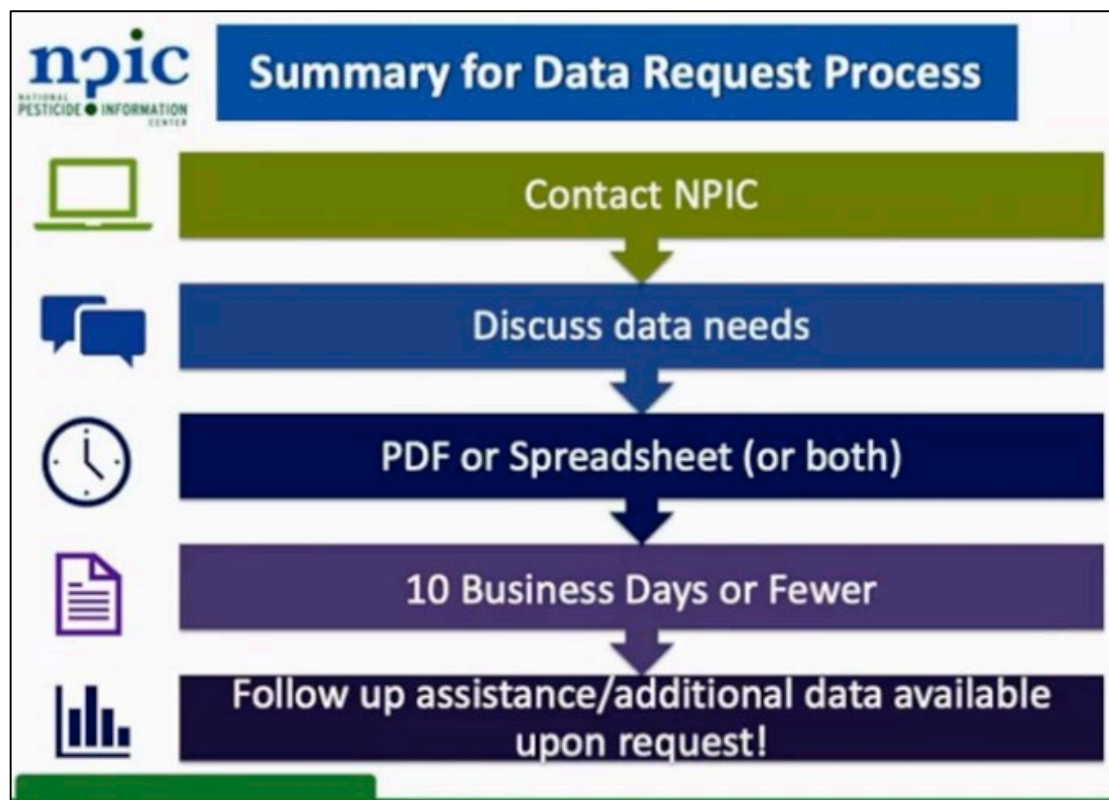
2018 Webinar:

How to Request Incident Data from NPIC

Audience: Federal, State, and Tribal Agencies

- What data does NPIC collect and what can it tell us?
- Examples of past requests
- How do I request it?

**27 Data Requests
in 2018**



Can I burn sulfur for pest control?

Sulfur is burned or vaporized to control fungus, mites, or insects. When sulfur is burned, it turns into a gas called sulfur dioxide. The gas can mix with moisture on plants to form an acid that can damage plant leaves. Breathing the gas can be harmful to human health.

What about burning or vaporizing sulfur in a greenhouse?

There are currently no sulfur products registered with the EPA that can be burned for plant protection. Pesticide products registered with the EPA have been tested for risks to people. **Labels** of registered products are written based on tests that instruct how much of a product to use, how to ventilate, and whether you must wear a respirator, gloves, or other safety equipment.

Even though elemental sulfur and vaporization tools can be purchased online and in stores, the EPA has not tested them for risks when used for **pest control** indoors or in greenhouses.



Always follow the label. There are no EPA-approved sulfur products for use in plant fumigation. There are unknown risks with using an unevaluated product.

Can burning sulfur make me sick?

If you can smell the gas, then you are breathing air that contains sulfur dioxide. You may be able to taste the gas before you can smell it. If you are working hard and breathing heavily, exposure to sulfur dioxide may be higher because you are bringing more air into your lungs. A person might be exposed if he or she is not wearing the correct respirator. Other effects to consider:

- Inhaling the gas from burning sulfur can cause coughing, sore throat, shortness of breath, and sinus problems.
- Eyes may become irritated, red, or painful and eye damage may be irreversible.
- Handling or touching sulfur without gloves may cause skin irritation.
- People with asthma or other respiratory problems may be more sensitive.
- Symptoms may not show up until a few hours after exposure.

If someone has been exposed, contact a Poison Control Center at 800-222-1222. To **report an incident**, call NPIC.

What are some ways to reduce risk?

- Use a pesticide that is registered with the EPA. All EPA labels come with safety precautions and directions for how to use the product. Using unregistered products for pest control may be a violation of **FIFRA** or **state pesticide regulations**.
- Avoid breathing in sulfur dust and gas from burned sulfur (sulfur dioxide).

We want to hear from YOU if you have ideas for educational materials.

<- FAQ about the risks of burning sulfur for pest control on plants

- no registered products
- NPIC, EPA Region 9, Ore. Dept. Ag., EPA OPP