

# Pesticide-related illnesses in WA

## Public health data

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Pesticide Program

1-888-586-9427

# Public Health

*Always working for a safer and healthier Washington*

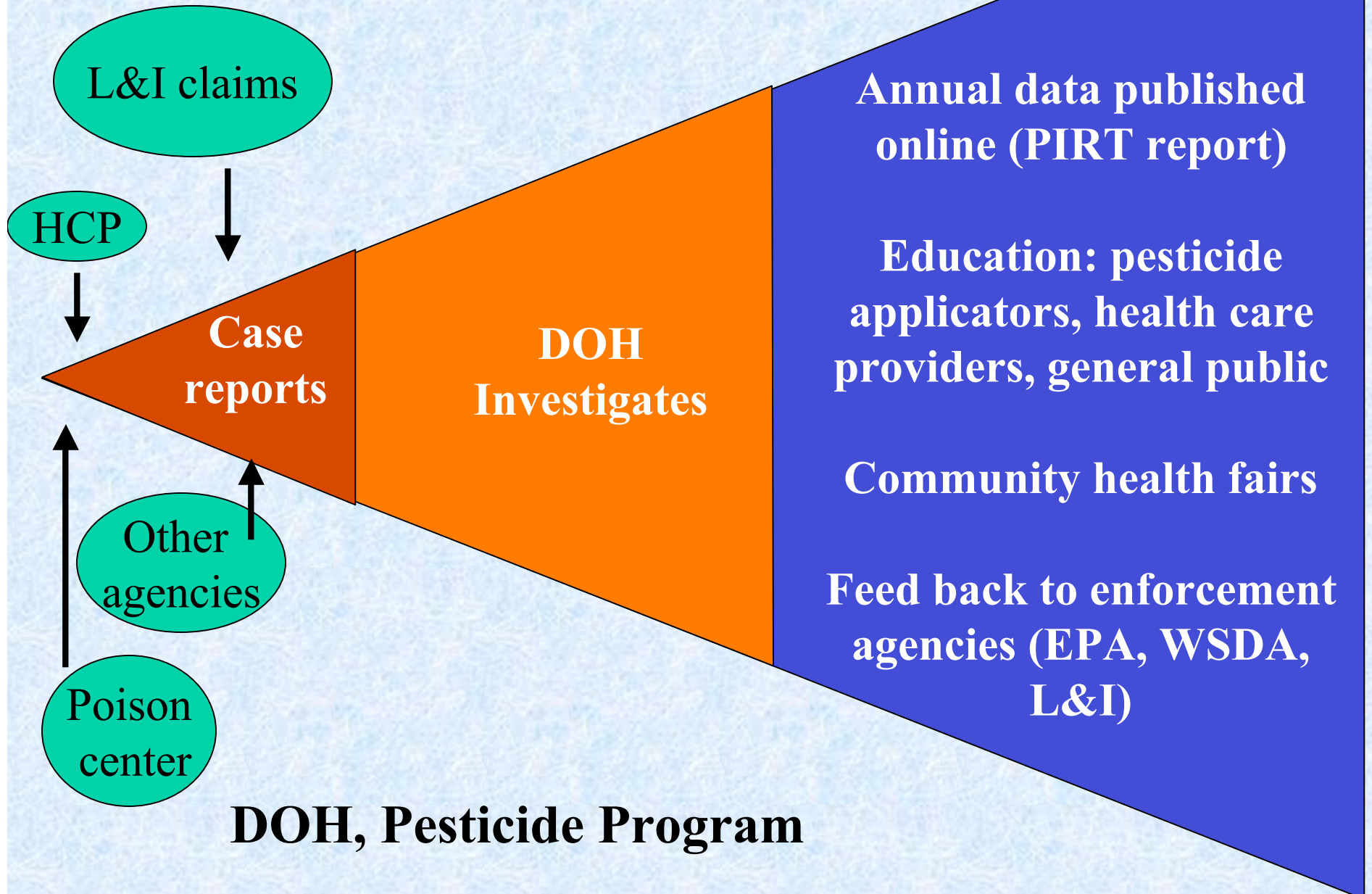
## Pesticide Program

- 
- Monitor disease rates/patterns →
  - Analyze causes →
  - Prevent disease →
  - Evaluate

- *Collect case reports*
- *Investigate cases*
- *Education*

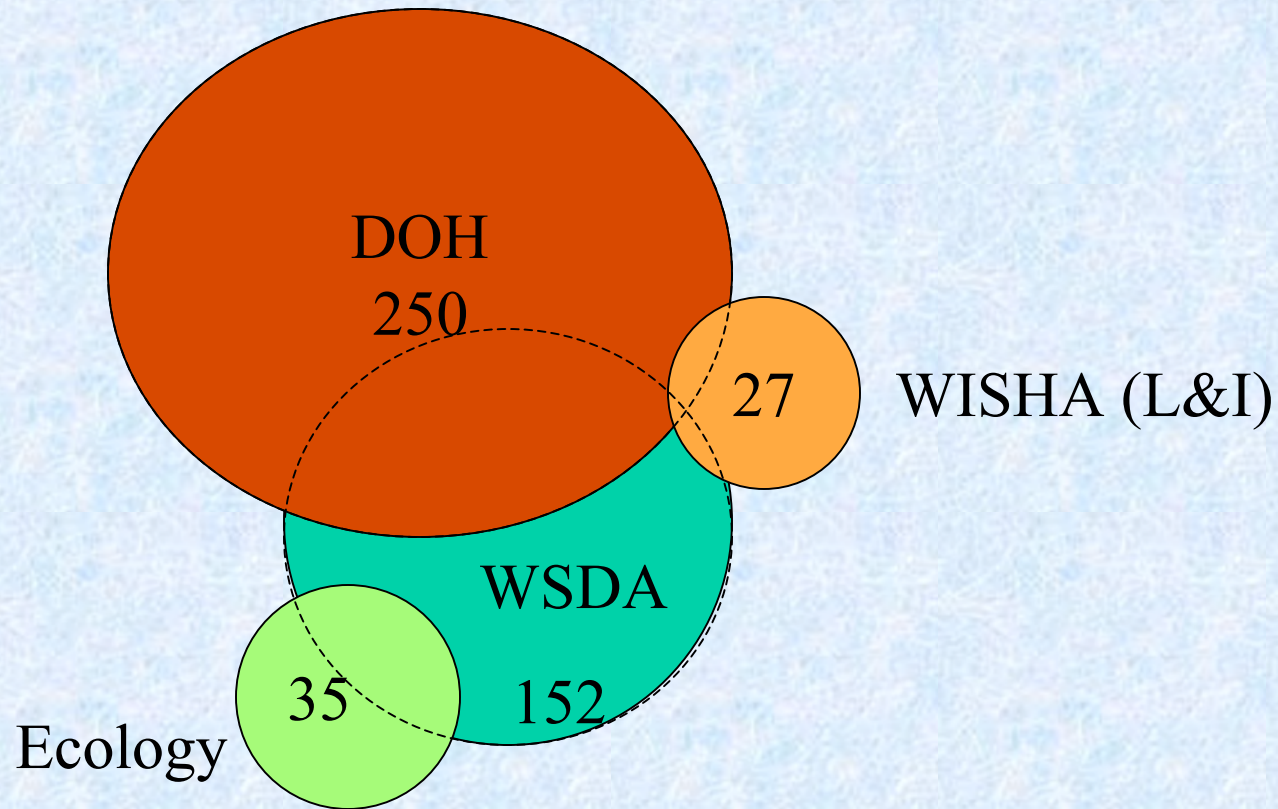
## Illness Surveillance

## Prevention



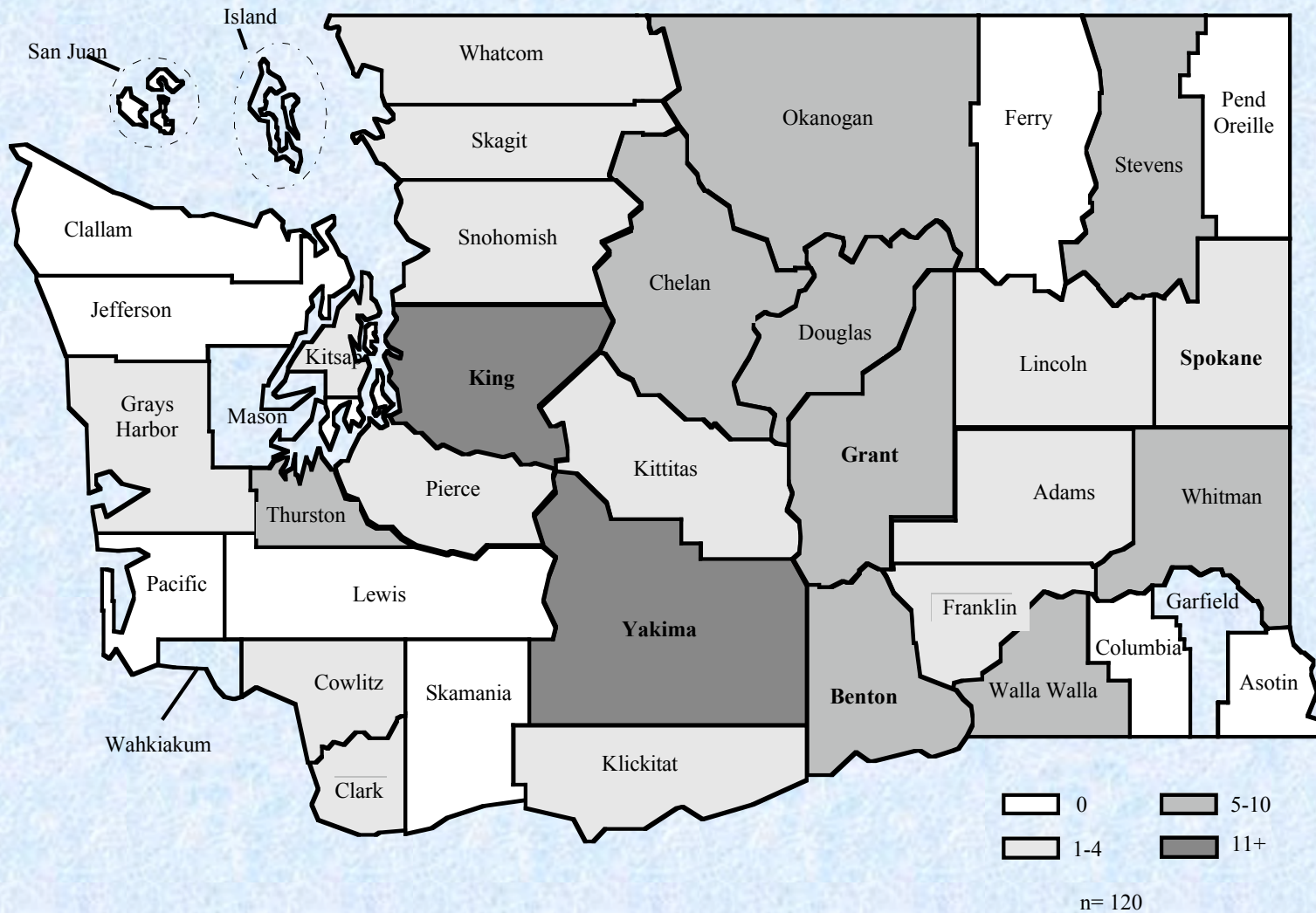
# Investigations of Pesticide incidents – 2001 data\*

## DOH compared to enforcement agencies



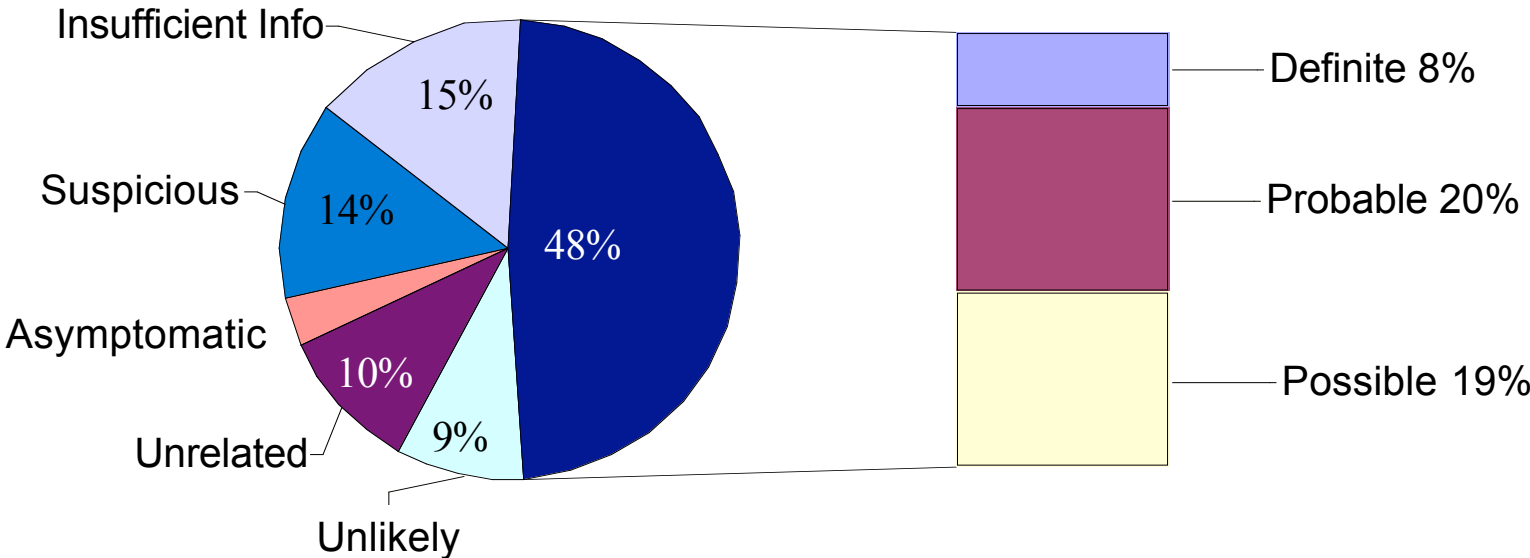
\*Pesticide cases investigated as reported in the 2003 WA annual PIRT report

# Distribution of 2001 cases\* by County



\*cases considered definitely, probably, or possibly due to pesticide exposure

# DOH classification of investigated cases 2001 data



# Definite, probable, possible

Causal relationship must be plausible:

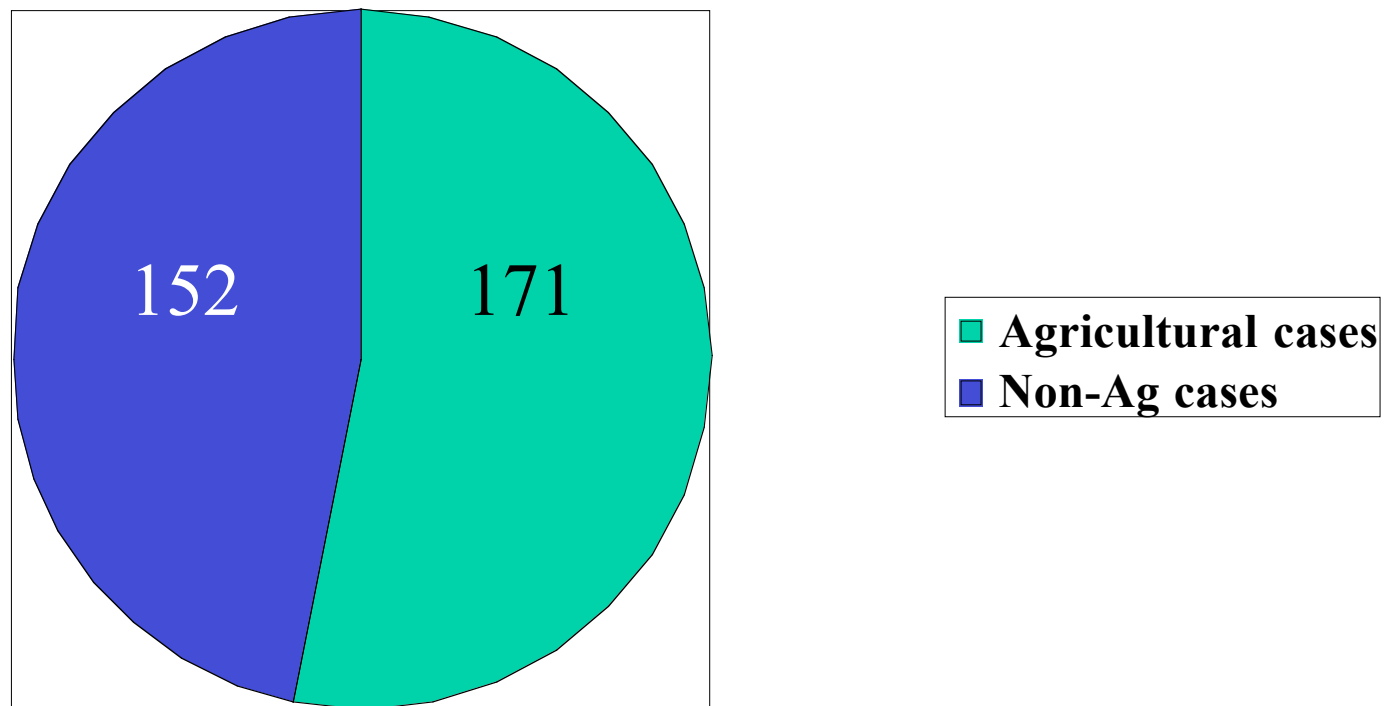
- Signs and symptoms documented during investigation are consistent with the known toxicology of the pesticide(s) involved.
- The time of symptom onset and pattern must be plausible for the exposure documented.

# Level of confirmation of exposure/health effect

Definite		+ objective evidence of exposure	+ objective clinical evidence of health effect
Probable	1		
	2		
Possible		Report by case, witnesses, spray records	Two or more symptoms reported by HCP or case

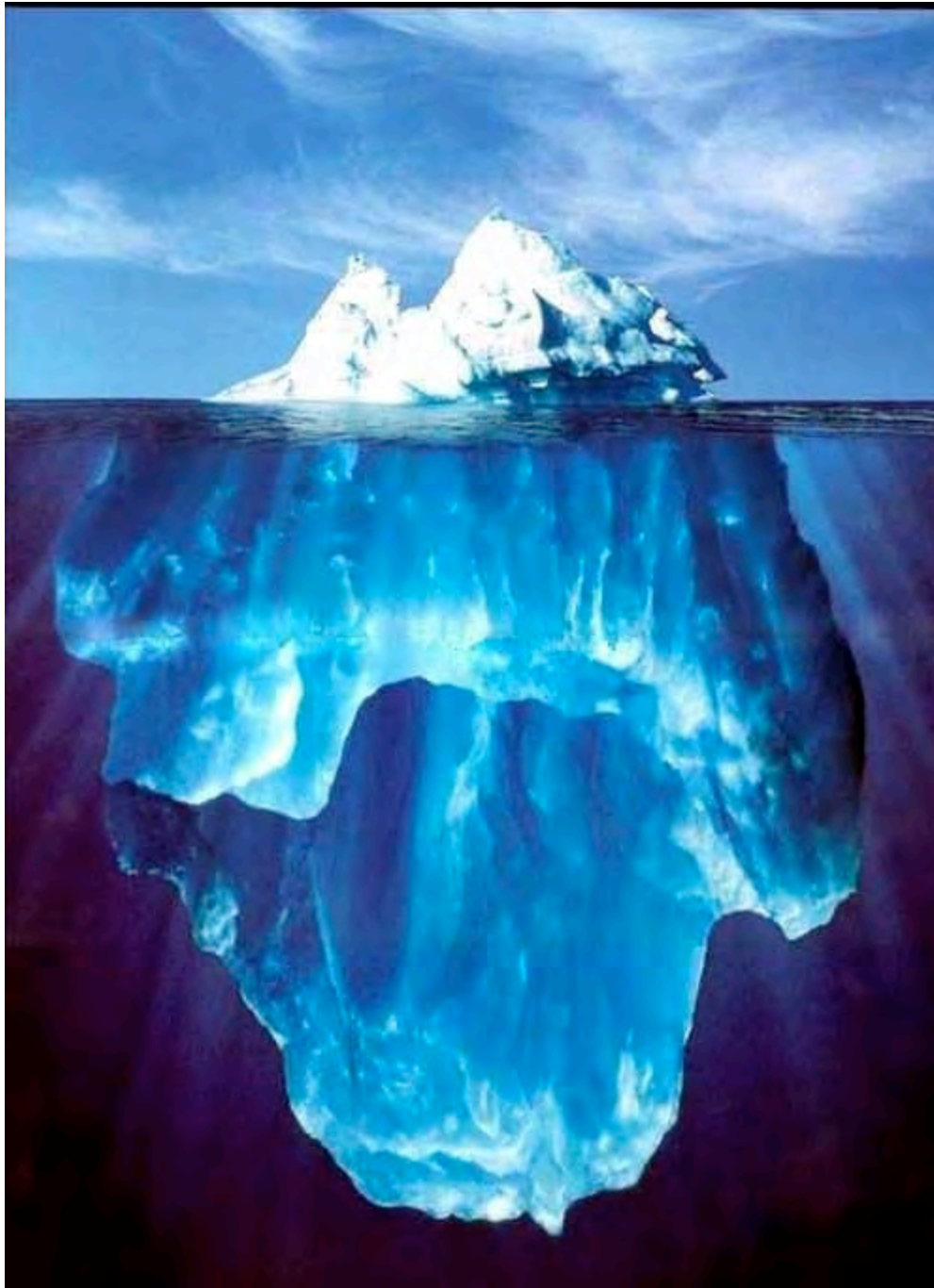


# DOH cases\* 2000-2001 data



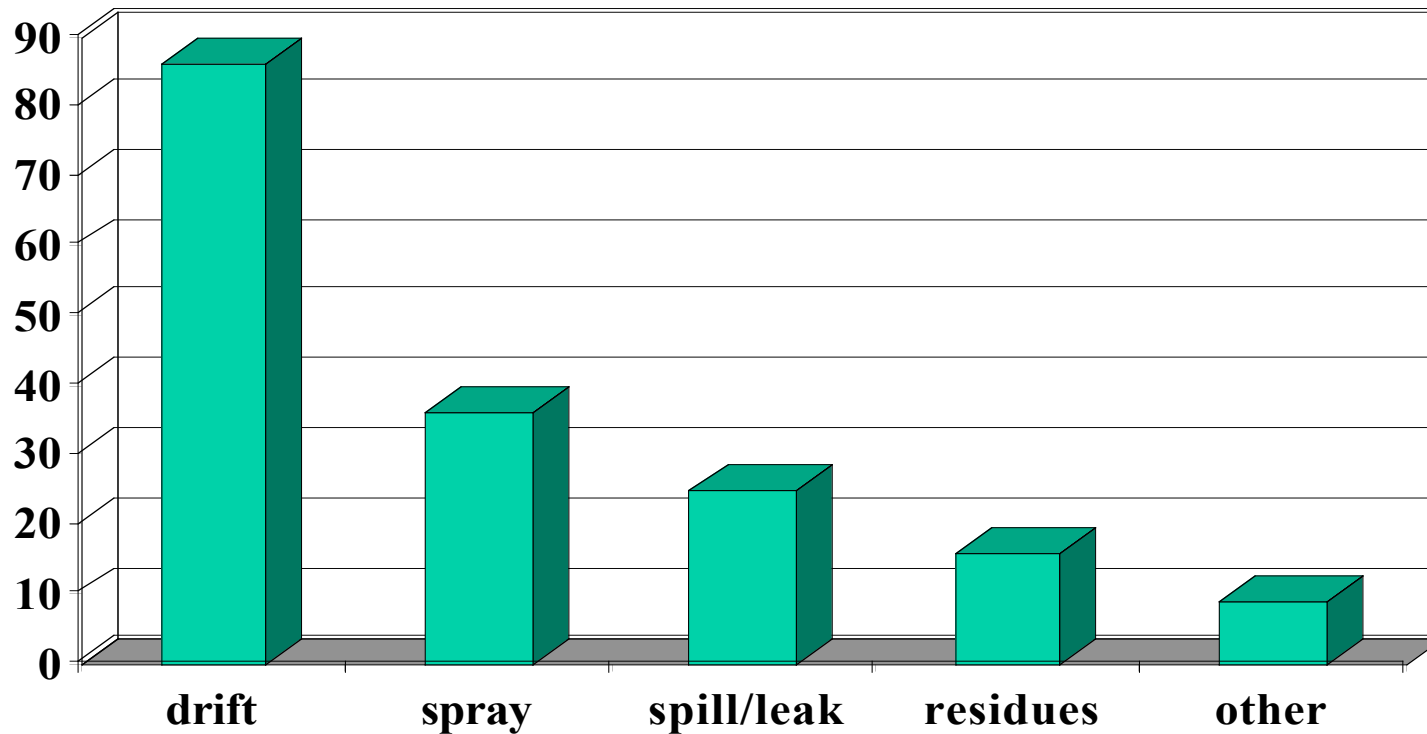
\*cases considered definitely, probably, or possibly due to pesticide exposure

**Tip of the  
Iceberg?**



# Nature of exposure

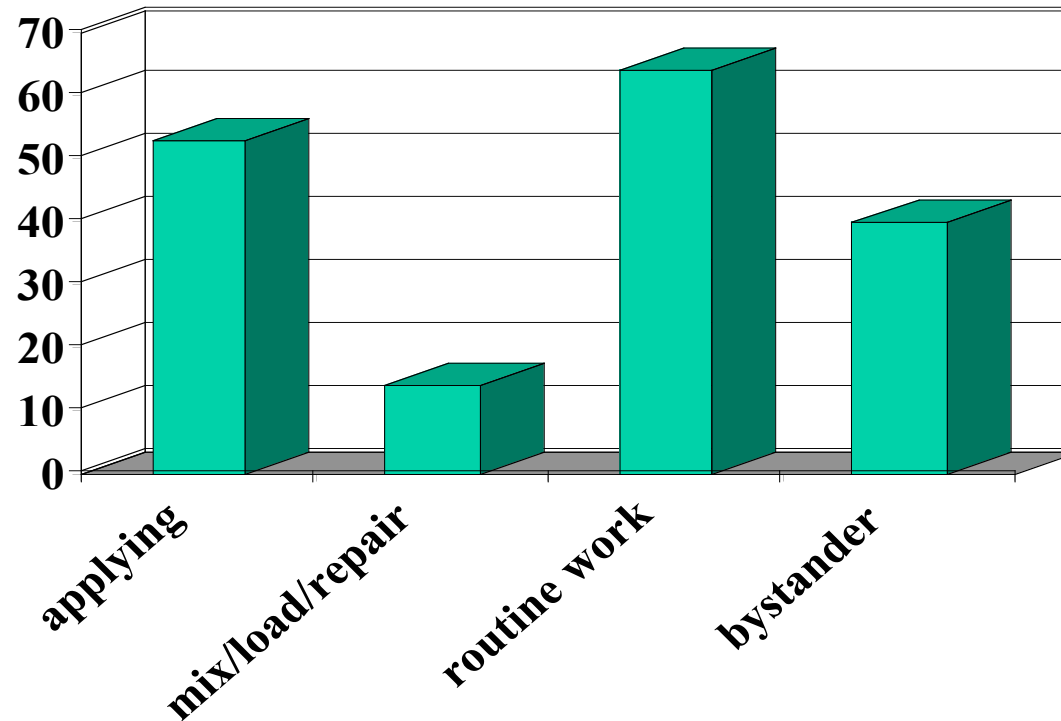
## Agricultural cases, 2000-2001 cases\*



\*cases considered definitely, probably, or possibly due to pesticide exposure

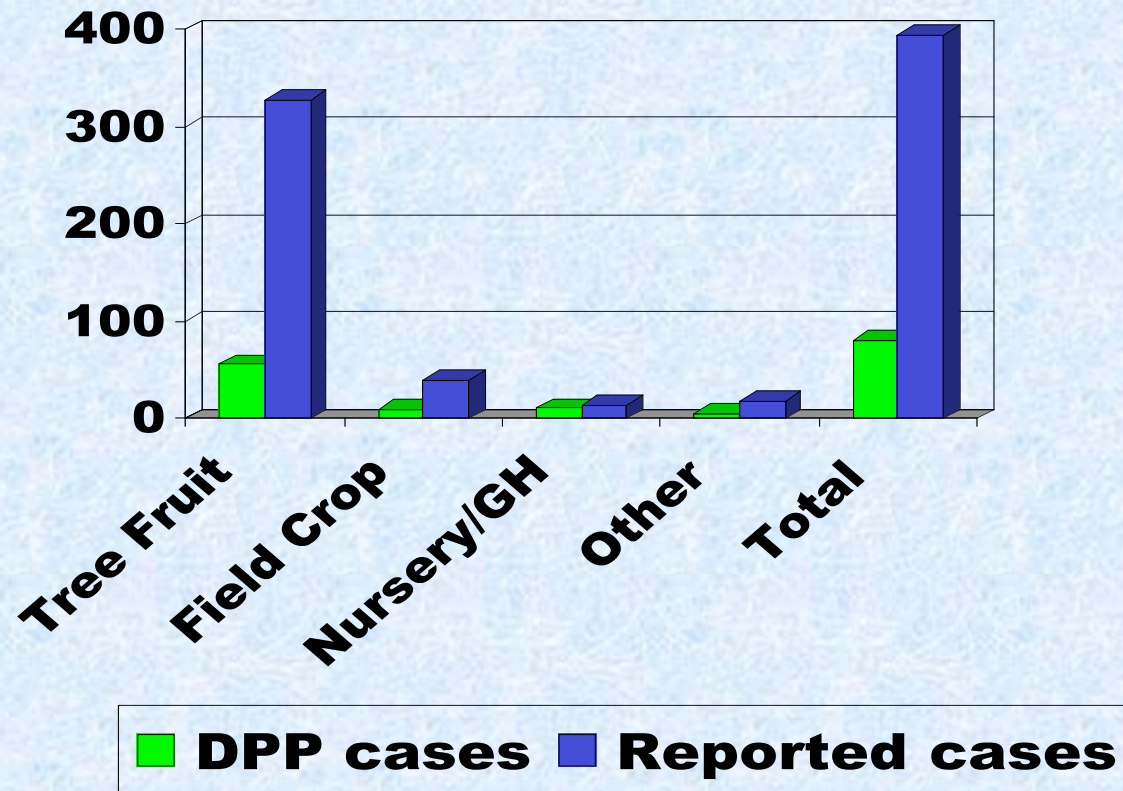
# Activity of person exposed

## Agricultural cases, 2000-2001 cases\*

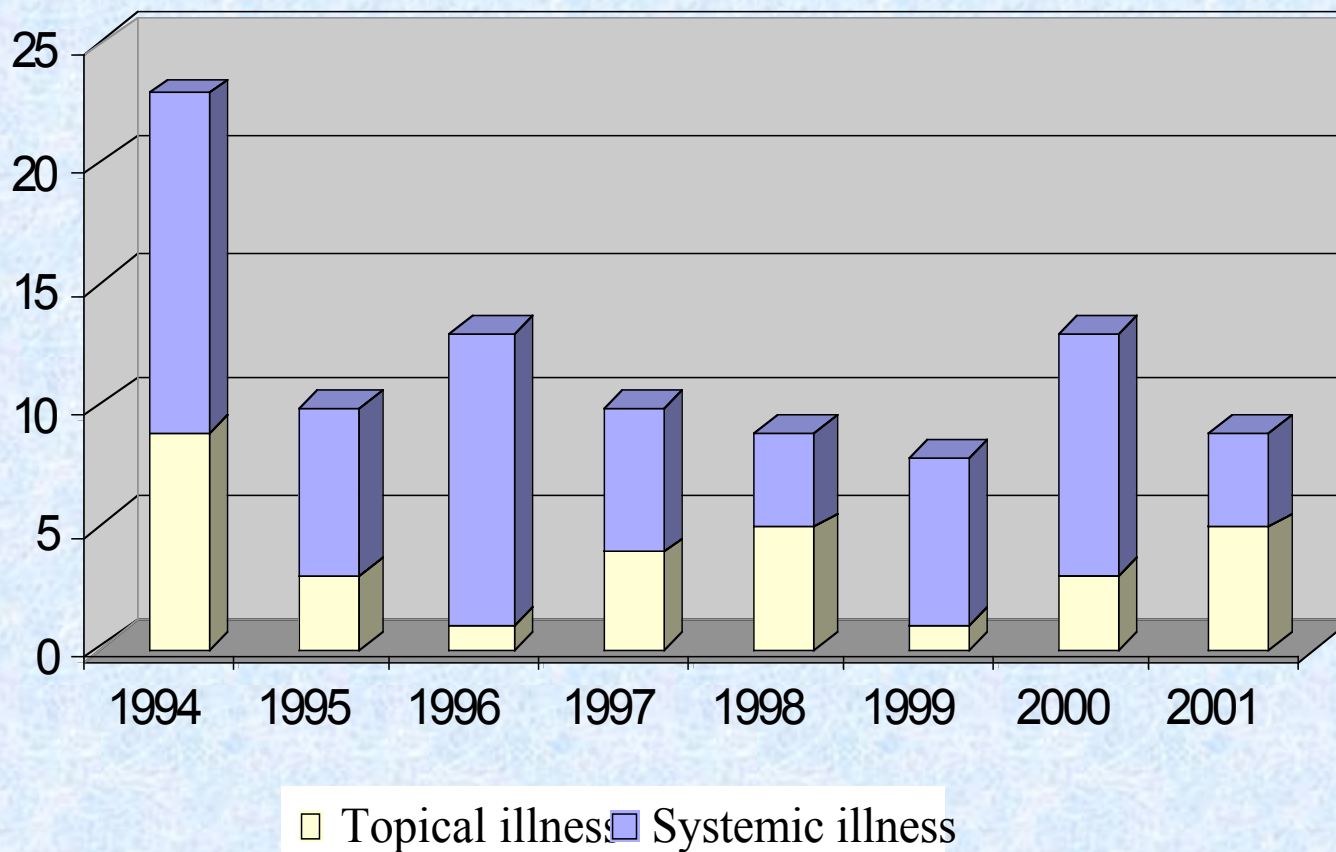


\*cases considered definitely, probably, or possibly due to pesticide exposure

# Exposures to Pesticide Residues Agricultural Cases, 1995-1999

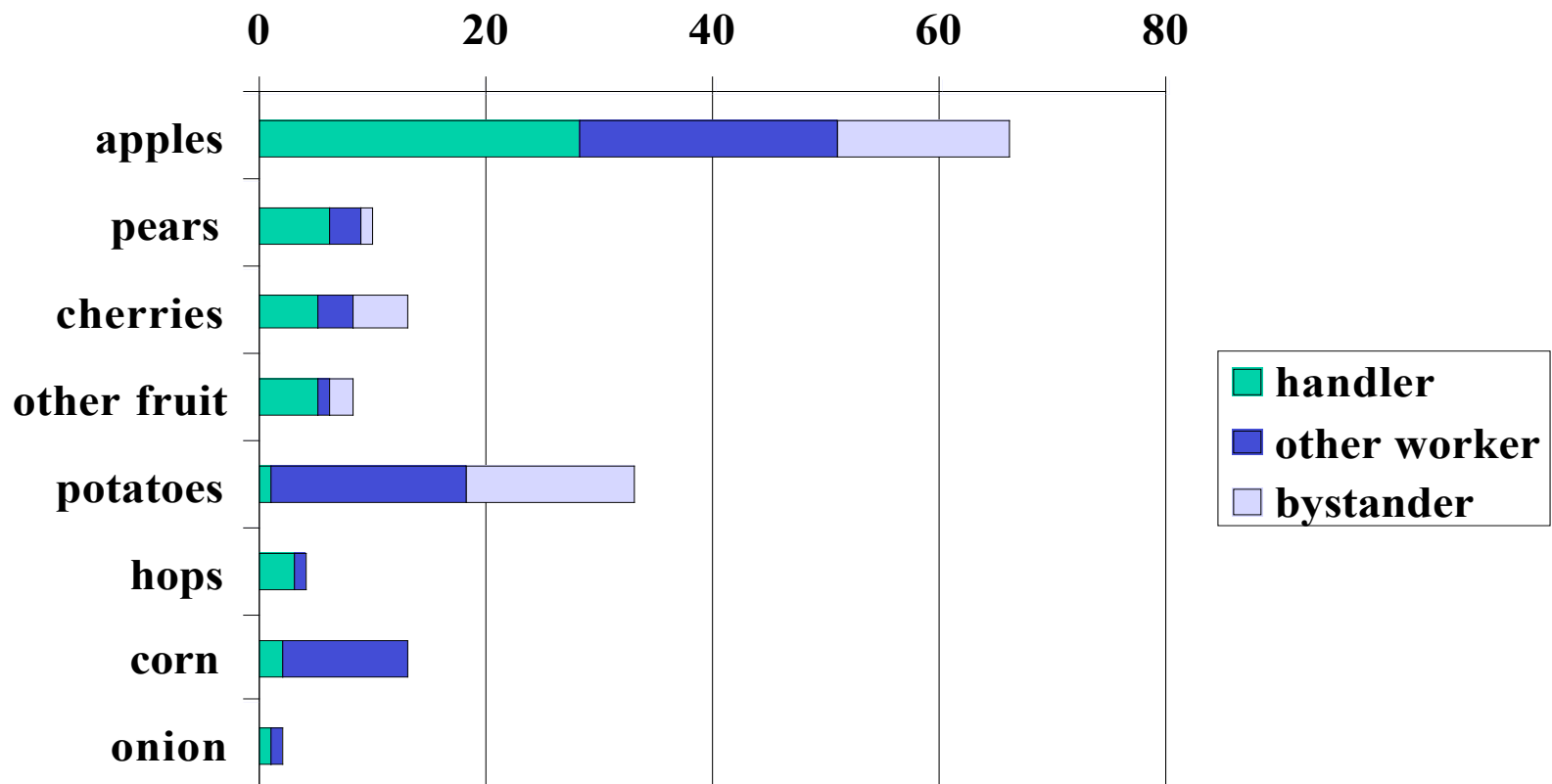


# Systemic and Topical Illness/Injury\* Trend Agricultural Handlers and AChE Inhibitors



\*cases considered definitely, probably, or possibly due to pesticide exposure  
\*\* Handler = mix, load, or apply, repair spray equipment

# Top crops involved Agricultural cases, 2000-2001



\*cases considered definitely, probably, or possibly due to pesticide exposure

# Key prevention messages

## Agricultural cases

- Target prevention in apples, potatoes
  - Handlers – eye protection, other PPE
  - Drift reduction to protect field workers/bystanders
  - More attention to field residue exposure (are re-entry intervals followed, protective?)





## **DOH case 020005**

- 24 y/o male
- Licensed applicator
- October chemigation for potatoes
- Shift is from 5PM to 4 AM
- Checks application every 2 hours

Photo: Doug Wilson, ARS photo gallery

# Pesticide involved

Metam sodium (Sectagon 42)  
(Forms MITC in soil, fumigant)

Possible replacement for methyl bromide

Known irritant to eyes, respiratory, skin

# DOH Case 020005

- Full PPE (respirator and suit) while in field
- In his pick-up truck 100 ft from field when he wasn't checking the field (no PPE)
- Fell asleep in truck after shift (4 AM)
- Awoke at 10 AM – strong smell in truck
- Temperature inversion

# Health effect

## *Initial symptoms*

- Burning in lungs and throat
- Chest tightness
- Went to ER, same day
- Chest X-ray: negative

## *Medical follow-up*

- Recheck at 7 days
- Dx. Exposure to inhaled irritant/mild bronchospasm
- Prescribed inhaler
- DOH followed - 8 wks
  - c/o Burning in lungs
  - c/o Shortness of breath

# DOH Actions

- Classified “Possible”
- DOH provided case description to EPA during metam sodium re-registration .
- Letters of support for research into drift reduction and alternatives to chemigation for potato field fumigation