



# **Clean Sweeps Around the Great Lakes Basin – Opportunities & Constraints for Future Obsolete Pesticide Collections**

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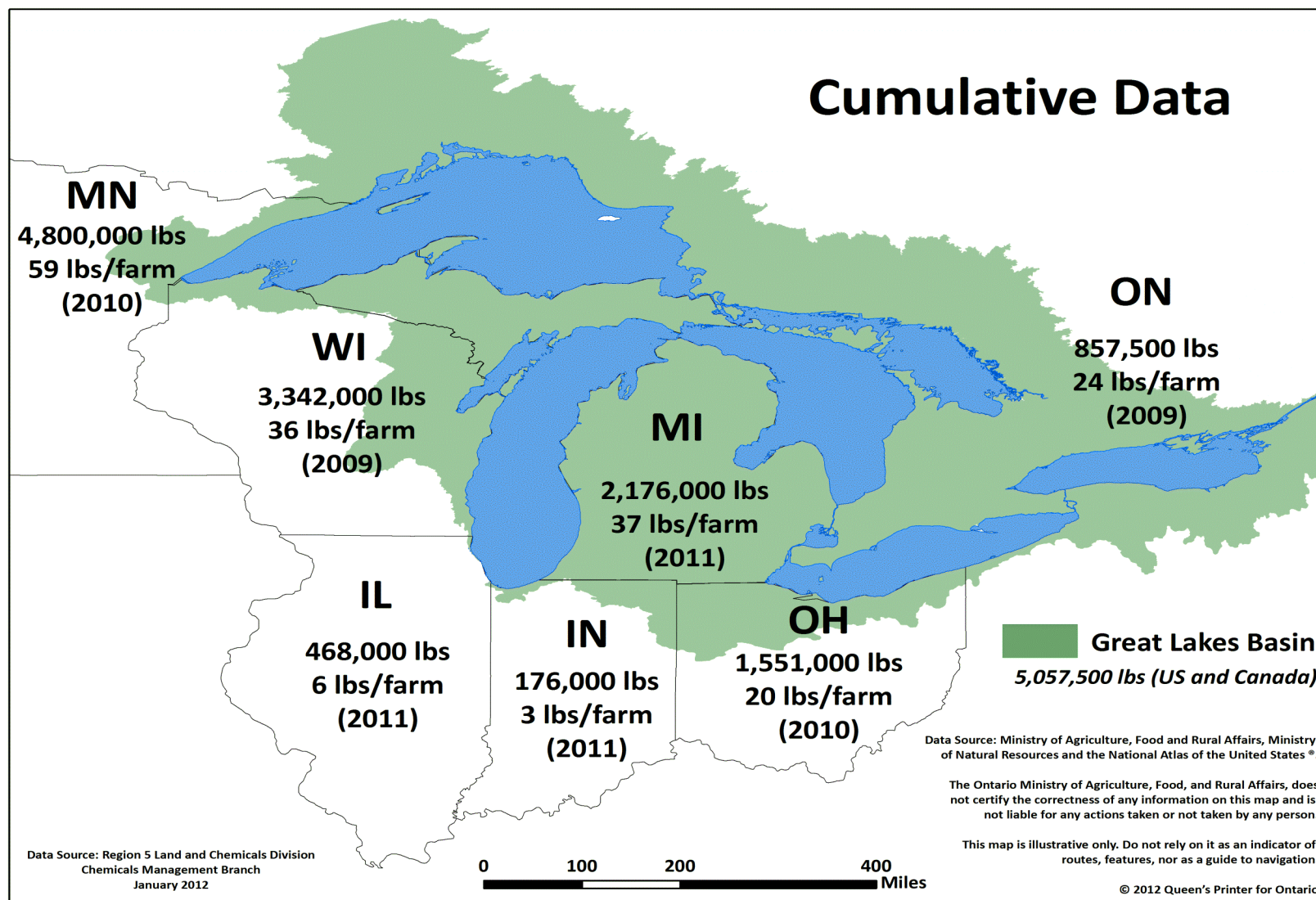
## Outline

### Good News Story:

- Clean Sweep Results US and Canada
- General Design & Delivery of Clean Sweeps in US and Canada with focus on Great Lakes Basin
- Lessons Learned from Successful Clean Sweeps
- 2009 Ontario Obsolete Pesticide Farmer Survey
- Opportunities & Constraints for Future Clean Sweeps

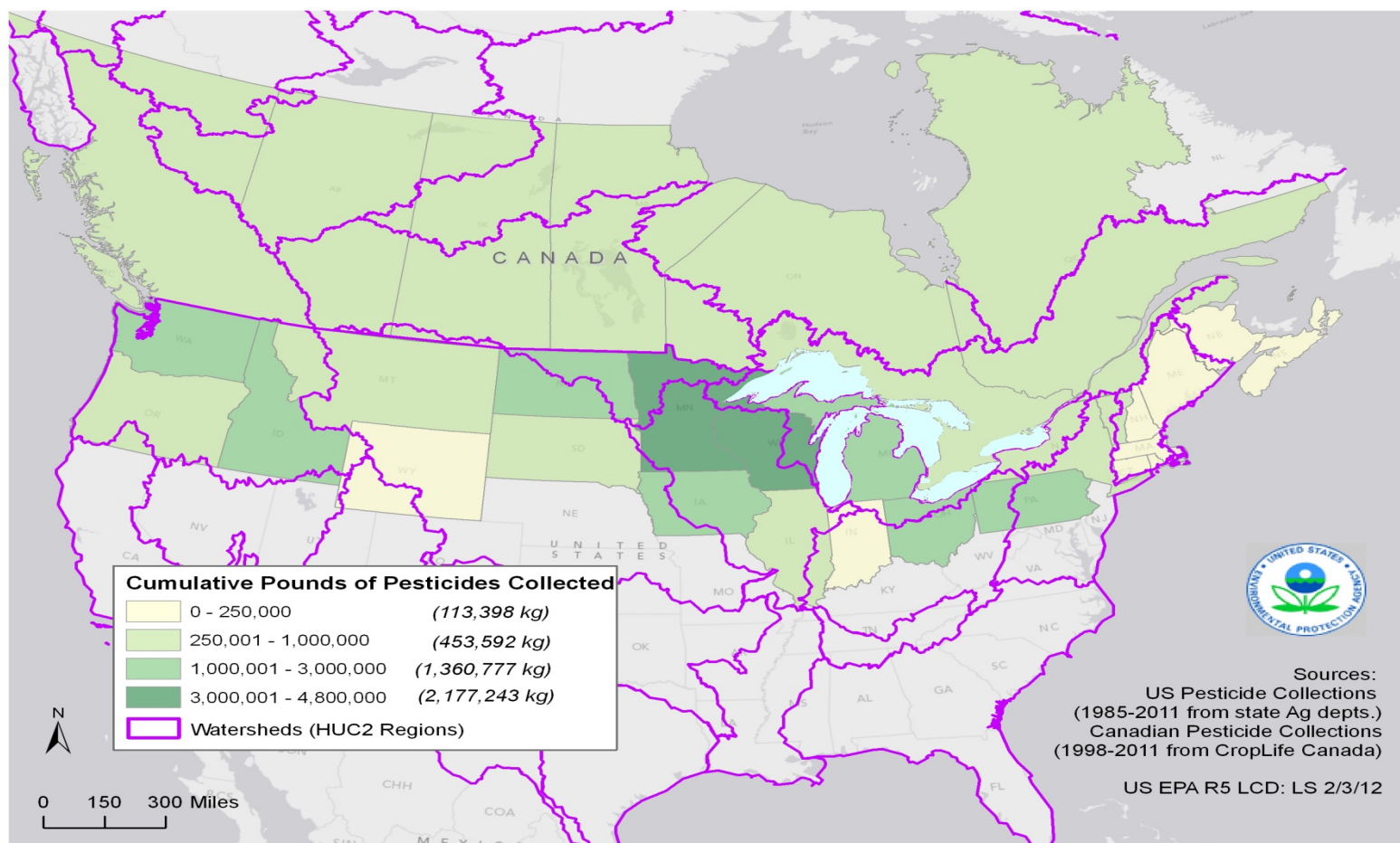


# Clean Sweep Results Great Lakes Basin





# Cumulative Pounds of Pesticides Removed from Canadian/US Watersheds through 2011



# US Great Lakes Region Clean Sweeps

## General Features

### Champions

- EPA, state and local government (20 years)

### Timing

- Majority are periodic every few years with two states (MI, WI) year-round

### Location

- Trend toward decentralized collections at permanent locations; one example of complete state coverage (IL)

### Funding

- Industry not as involved as gov't in cost-sharing
- EPA has consistently funded clean sweeps for some states; MN, WI and MI fund ongoing collections using a surcharge on pesticide products, a portion of state pesticide registration fees, and ground water protection funds, respectively
- Average disposal cost \$2 / pound

### Legacy Pesticides

- 2-10%

# Canadian Clean Sweeps

## General Features

### **Champions:**

- CropLife/CleanFARMS, provincial & federal government (10 years)

### **Timing**

- Obsolete collection in every province usually every 3 years by CropLife/CleanFARMS

### **Locations**

- Decentralized collection using temporary locations (ag-retail sites)

### **Funding**

- Project funding is typically 50/50 industry/government with government cost sharing level ranging from \$200 to \$600K per campaign.

### **Budget**

- Overall - Disposal costs (incineration) around 60%; site logistics costs 20-30% and communication 15-20%. Disposal cost range \$1.60/lb.

### **Legacy Pesticides**

10-15%



## Ontario Clean Sweep 2009 Details

- **Ontario is a Big Place** – Many farmers (34%) willing to drive up to 50 km
- **Ontario Farmers are Patient** - Over 34% of the participants indicated the crop protection products they were bringing to the collection were in their possession for more than 10 years (81% stored more than 5 years)
- **Ontario Farmers Listen & Read** - Most participants learned about the collection from their ag retailer (26%). Newspapers, grower associations, web and neighbors were also cited as sources of information about the Clean Sweep event.
- **Ontario Agriculture is Diverse** - 75% participants were primary producers and 25% ag-retail, nursery, greenhouse and turf industry

## Successful Clean Sweeps – Lessons learned in US and Canada

- Accessibility of obsolete pesticide drop-off locations to farmers (reasonable driving distance and hours of operation)
- Effective communication in farmer-friendly publications and websites
- Volunteers trained on health & safety
- No fee to farmers for drop-off
- Legacy product drop-off allowed
- Open to all users of “Commercial” labelled pesticides

## 2009 Ontario Farmer Obsolete Pesticide Survey – Attitudes and Opinions

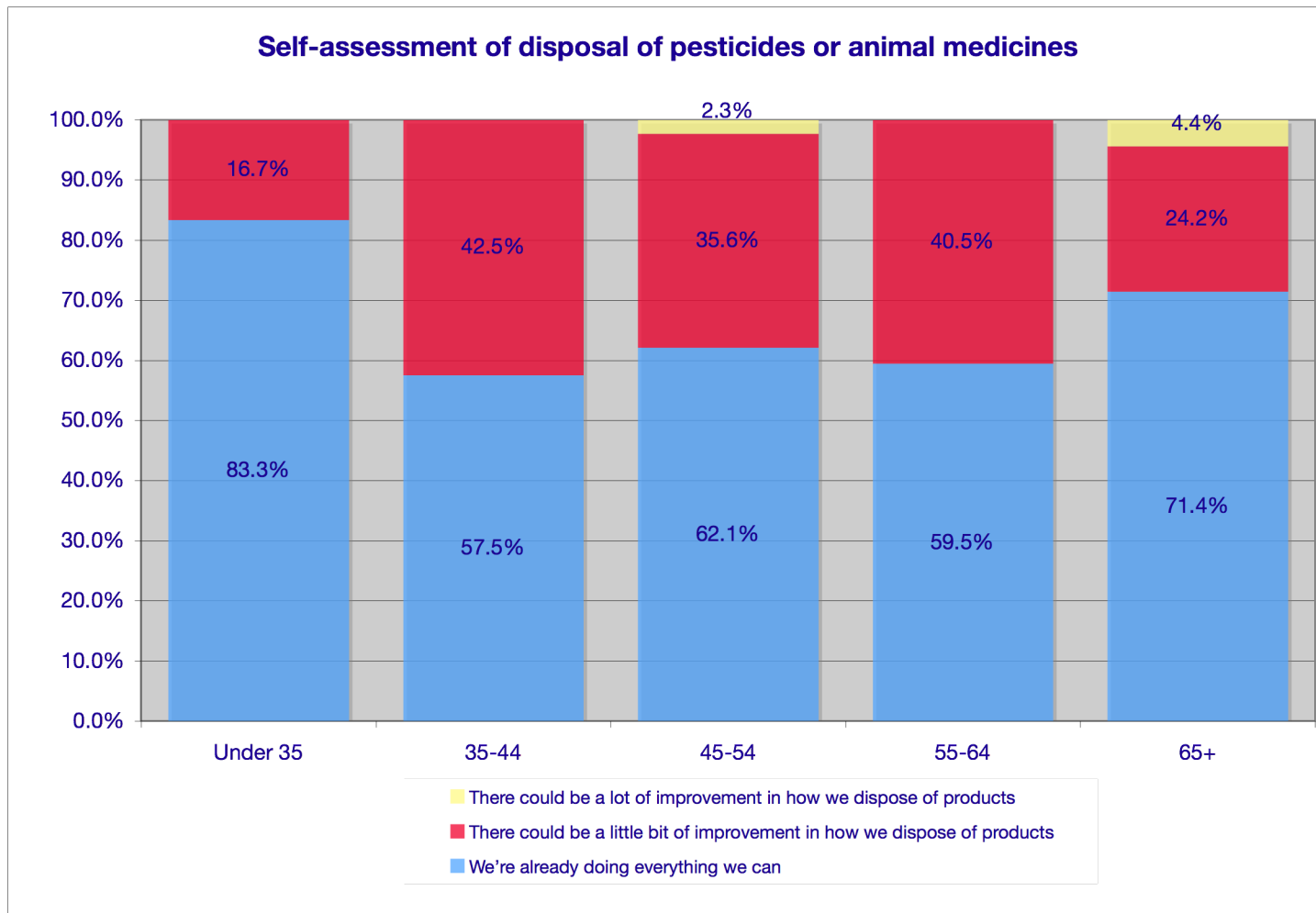
- 387 telephone surveys across Ontario
- Results are statistically significant to within  $\pm 5\%$
- Random sample of Ontario producers (southern Ontario)
- Producers ranged from a small 2 acre berry pick-your-own to a 7500+ acre cash crop multi-generational family operation
- Survey included questions for behavioural segmentation, standard demographic data plus business stage ('Expand', 'Maintain', 'Reduce' or 'Retire')



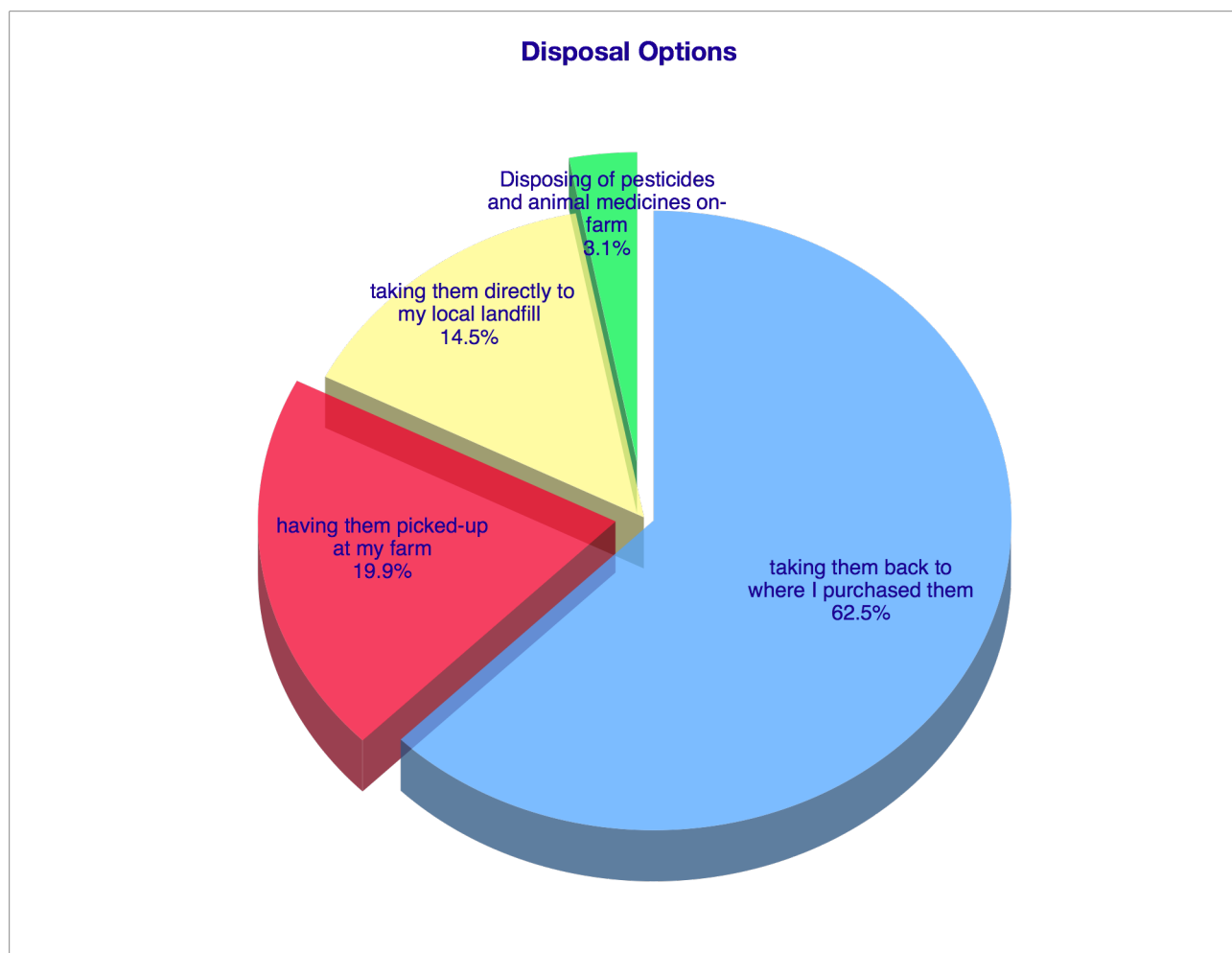
## 2009 Ontario Farmer Obsolete Pesticide Survey – Key Results

- **Waste management part of good business** – 98% respondents agree, regardless of age or stage of business
- **Open to Change-** 2/3 of all producers have made changes to their waste management practices but most believe they are doing all they can
- **Willingness to Transport** - Only 20% prefer obsolete pesticides be picked up at their farm
- **Willingness to Seek Out Multiple Sources of Information on Obsolete Pesticides** – not one trusted source of information sought out by farmers, older farmers have more time or more comfortable using many sources
- **Willingness to Pay** – Over 2/3 willing to contribute small fee for disposal

## Self assessment of disposal of pesticides or animal medicines (by producer age)

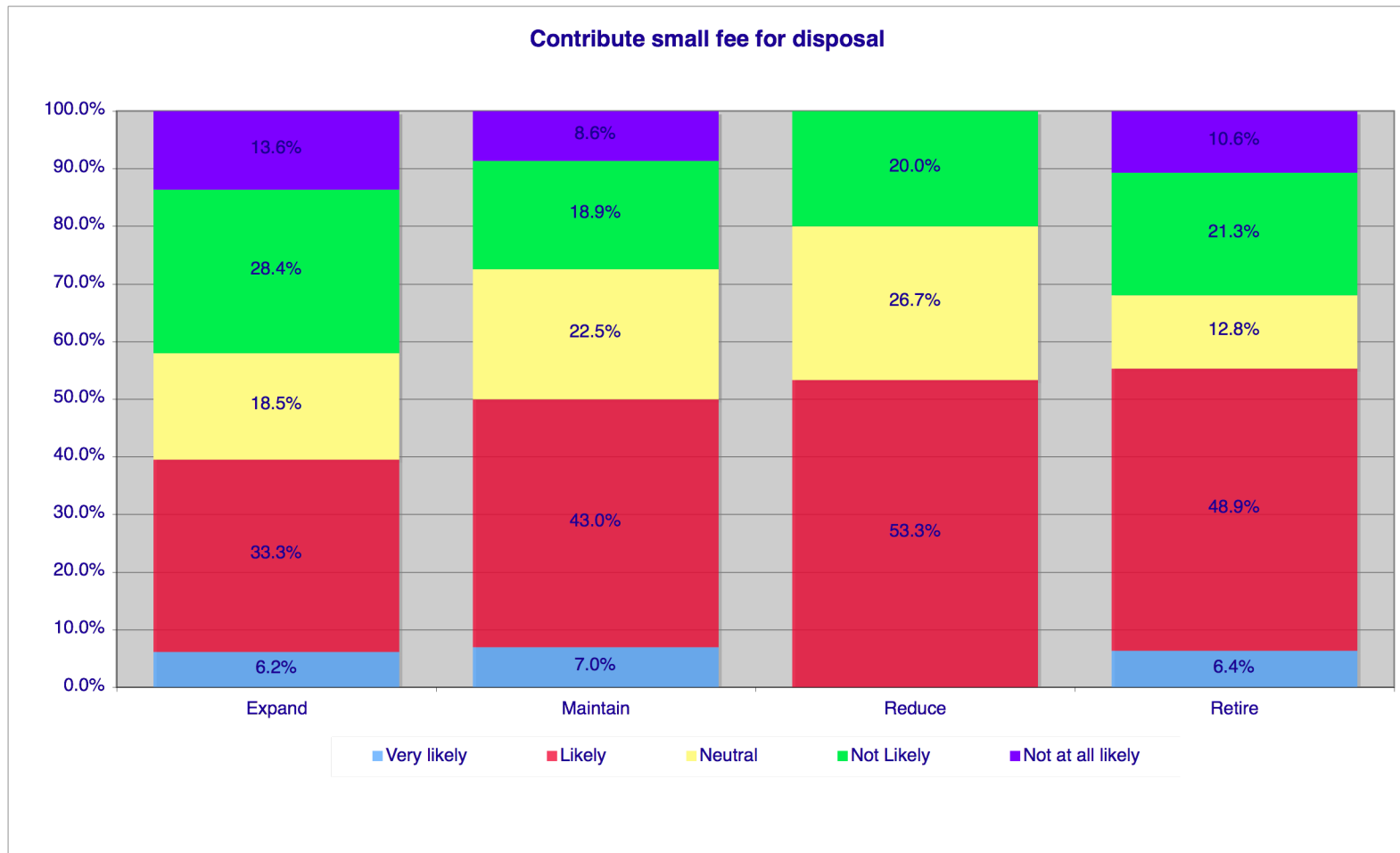


## Preferred Options for Disposal of Pesticides and Animal Medicines

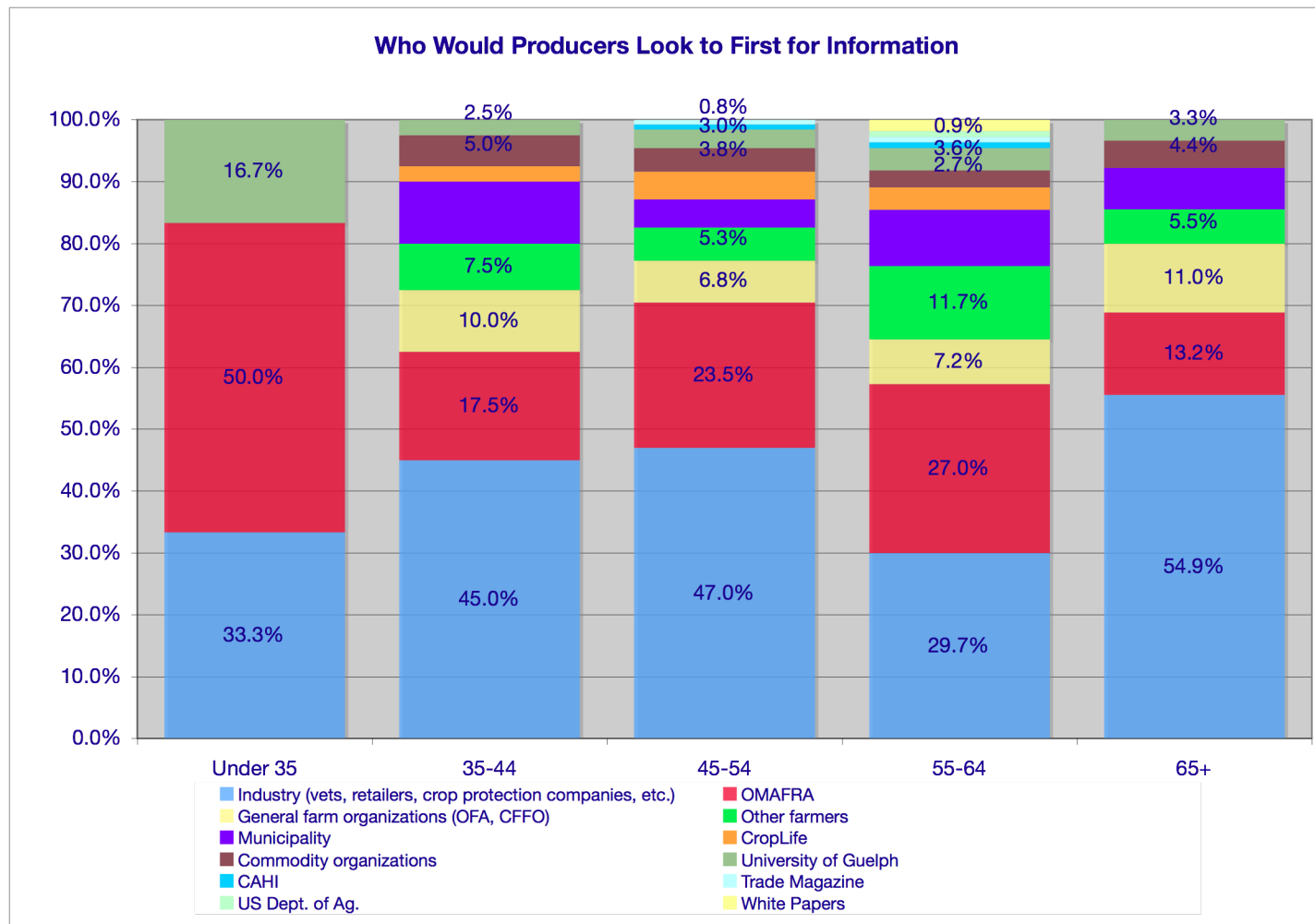




# Likelihood of Financial Contribution by Producers (by business stage)



# Sources of Information for Disposal of Pesticides and Animal Medicines (by producer age)



## Future Clean Sweep Opportunities & Constraints

- **Tap into Farmers' Strong Environment Ethic and Target Legacy Pesticide Elimination as A Goal** – *Farmers are and want to be seen as responsible environmental stewards to other farmers and to consumers. Eliminating legacy pesticides is a positive legacy that farmers would want to leave to the next generation as well as their communities.*
- **Tap into Farmers Willingness to Pay Small Fee** – *Ontario farmers show strong willingness to pay a small fee. Pilot campaign could seek voluntary donations from farmers (for disposal costs) and use funds to expand service in more locations or increase frequency of collections.*

## Future Clean Sweep Opportunities & Constraints

- **Engage Producers in Setting Benchmarks or Targets for Planned Collections** – *Farmers know how much pesticide is purchased and used, involve them in setting campaign goal and reward for exceeding or meeting set goals; use competitive nature of farmers to campaign advantage*
- **Anticipate Farm Crop Transitions** – *Spike in disposal from crop transition such as shift from conventional to organic or shift in specific crops where different pesticides will be used such as transition out of tobacco to cash crop*
- **Recognize Cultural Values** – *90% producers in Ontario are “active” or willing to participate but rely on developments in Ontario & Canada for new ideas. Important to continue to assess any shift in cultural values as new farmers come into farming and as farmers move to retirement. On-going need to strengthen international collaboration & exchange of knowledge to soften cultural bias and encourage adoption of ideas outside N. America on obsolete pesticide collection & disposal.*



## Future Clean Sweep Opportunities & Constraints


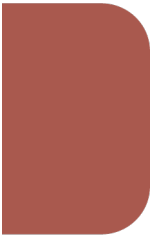

- **Forge New Partnerships**– *Watershed protection groups, Urban Agriculture/Hobby Farms, Animal Health Care (joint campaigns collecting unwanted pesticides and vet meds), First Nations*
- **Explore Special Geographies as Organizing Concept for Multi-Jurisdiction Clean Sweeps and Enlist Help from International Organizations**– *Example - Great Lakes and St. Lawrence River Valley, Columbia River Basin and Puget Sound, Lake Champlain (Quebec and Vermont), International Joint Commission (IJC), Commission for Environmental Cooperation (CEC), etc*
- **Support Farm Certification (Global Gap)** – *New driver for farmer participation*

## Future Clean Sweep Opportunities – Innovative Marketing (Alberta )





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