



# **MRL Issues and International Trade Commodity Perspectives**

## **Idaho Pesticide MRL Workshop**

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Boise, Idaho*

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AgBusiness Resources**



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## Topics

- US Trade Trends and Global Food Systems
- MRLs as Barriers to Trade
- The MRL Process – Why Does It Take So Long?
- Why Are MRLs Different?
- How MRLs Impact IPM
- What Happens When There is a Violation
- Managing MRL Issues
- Resources and Recommendations



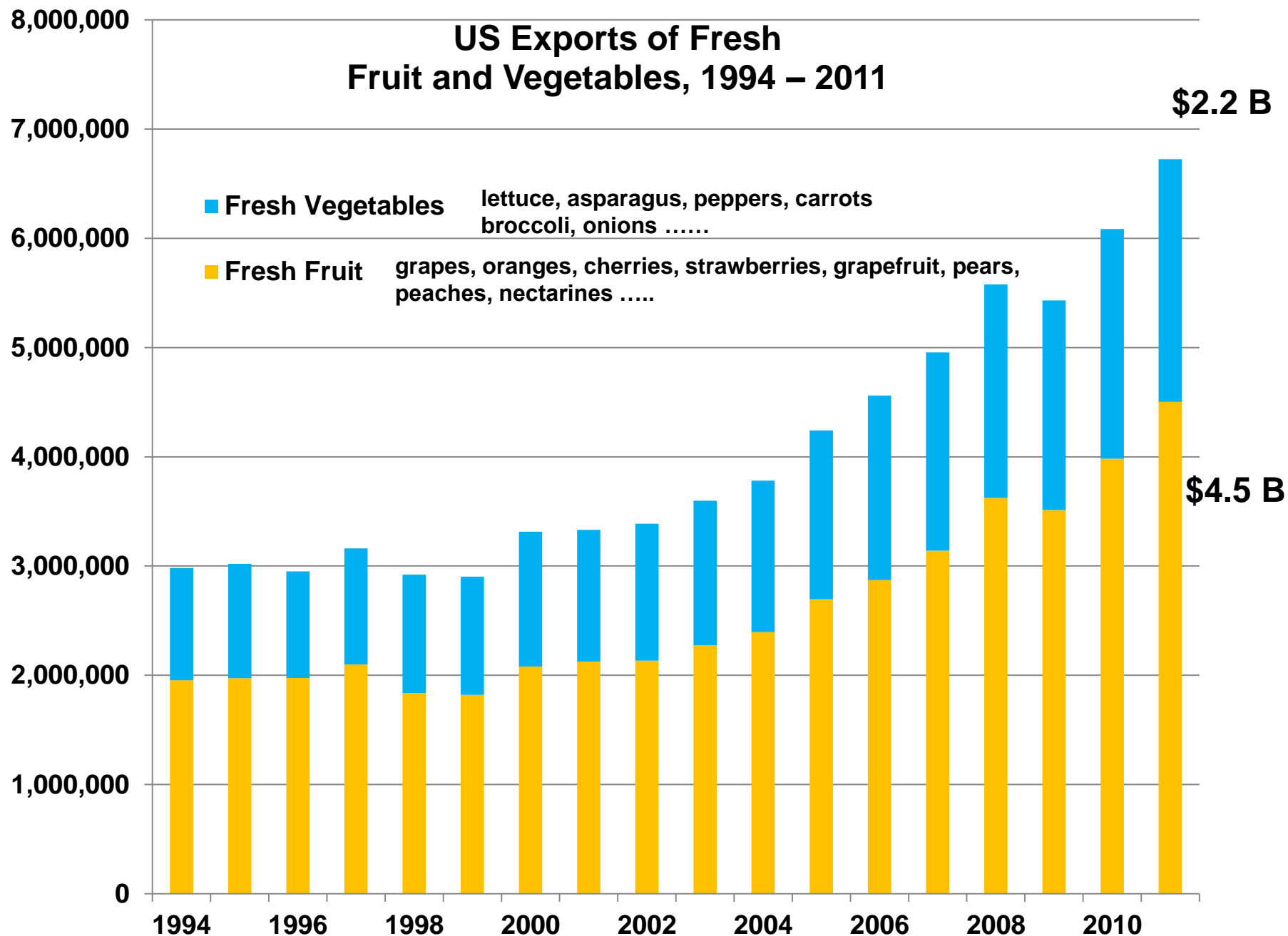


## **Interest in MRLs**

- Entomologist, etc.
- 20 Years CA Ag
- Registrant – R&D, Tech Rep
- CA Specialty Crops Council
- Pest Management & Stewardship
- Consulting
- MRL Growing Issue
- Licensed Pest Control Advisor (PCA)

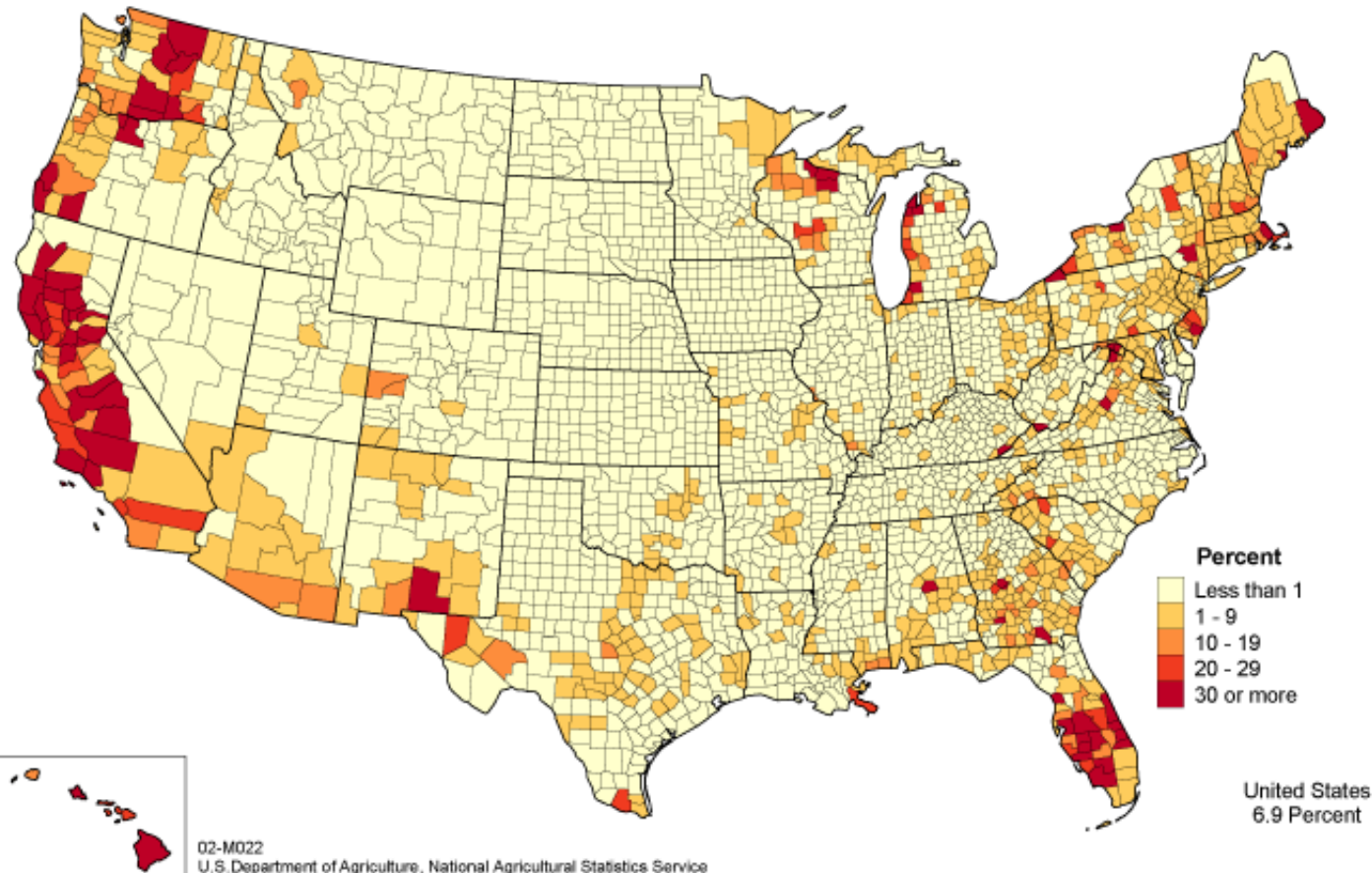


## US Exports of Fresh Fruit and Vegetables, 1994 – 2011



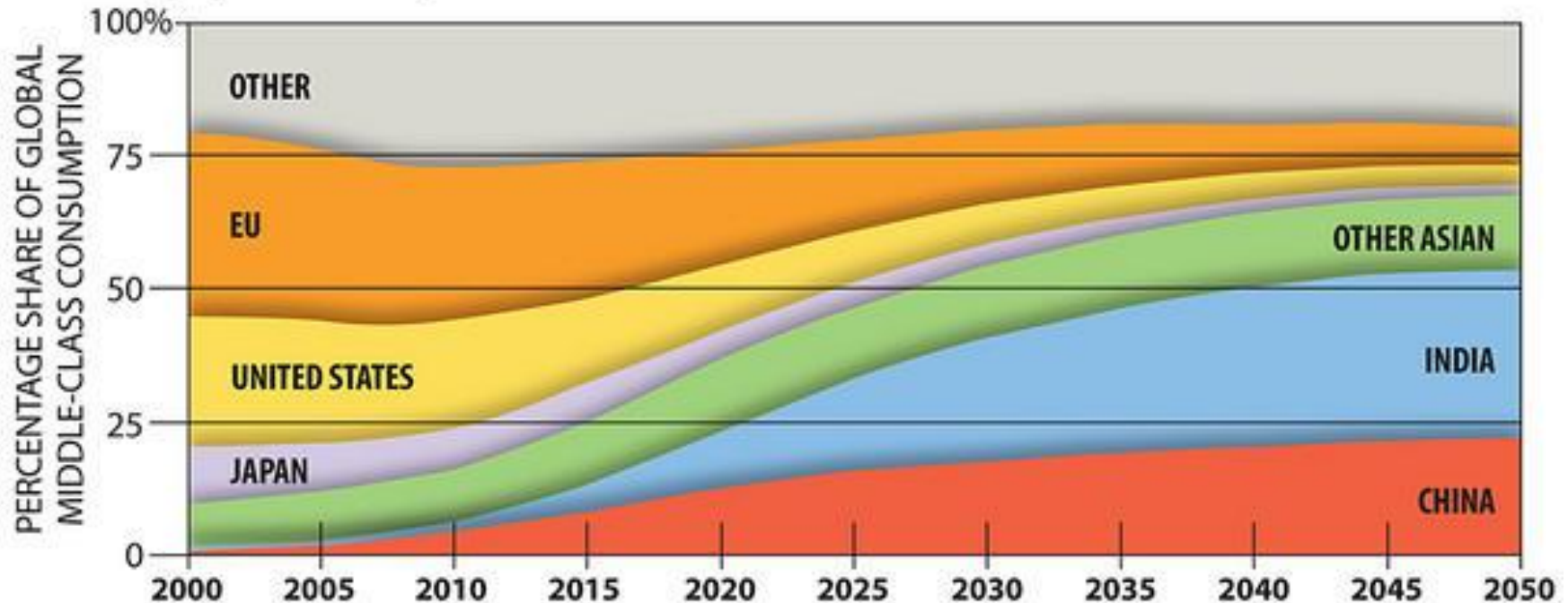


**Value of Fruits, Tree Nuts, and Berries  
as Percent of Total Market Value  
of Agricultural Products Sold: 2002**



# The global middle-class wave

Global middle-class consumption will shift heavily toward China, India, and other Asian countries (excluding Japan) as the high-income countries see their share decrease.



SOURCE: H. Kharas (2010), 'The Emerging Middle Class in Developing Countries,' OECD Development Centre Working Paper No. 285

RICH CLABAUGH/STAFF



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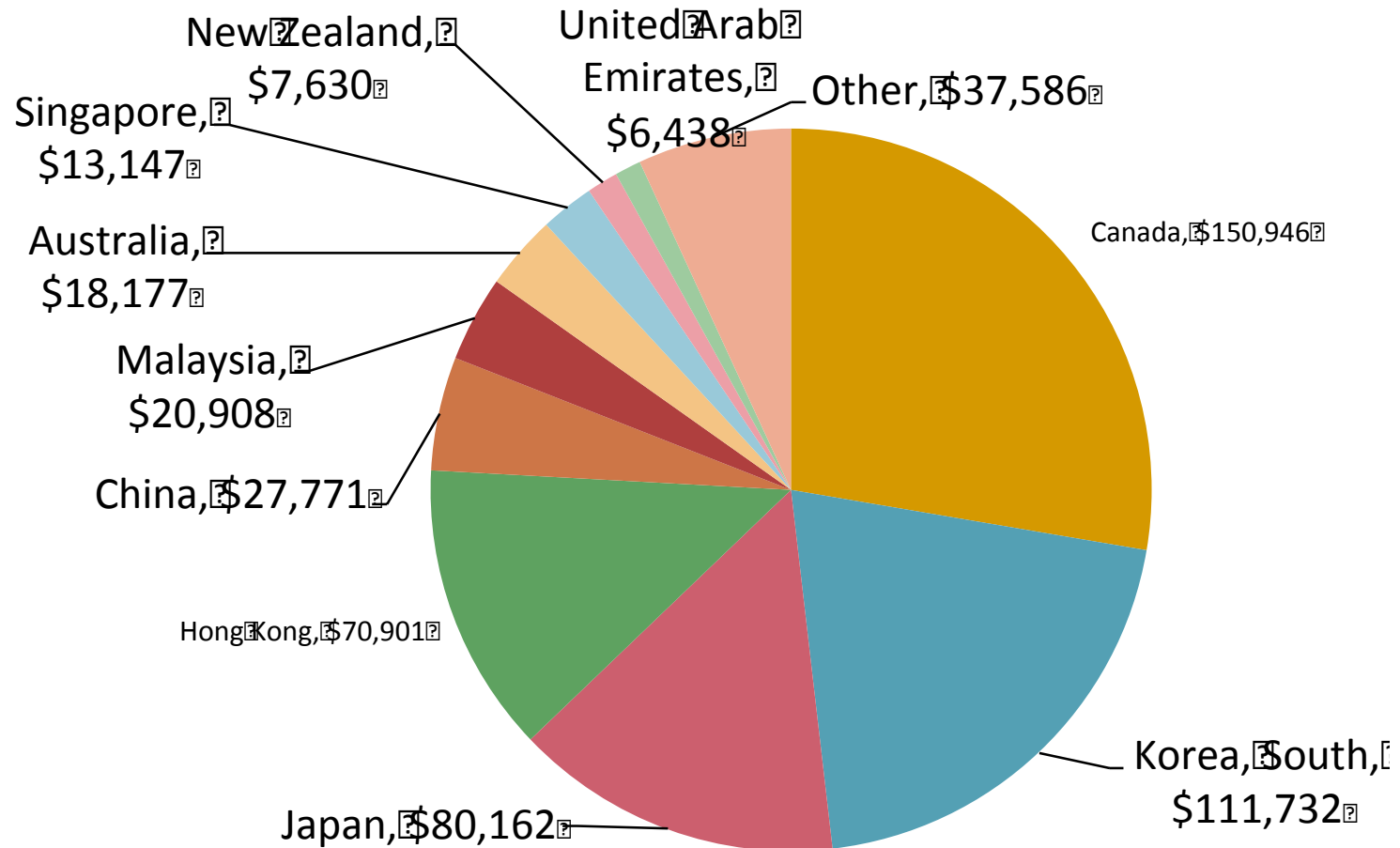
# California Ag and Exports

- 350 Specialty Crops
- 30% Value of Exports
- Almonds – 90 Countries
- Walnuts
- Citrus
- Wine
- Grapes
- Canada, Asian, EU
- MRLs are a HUGE issue



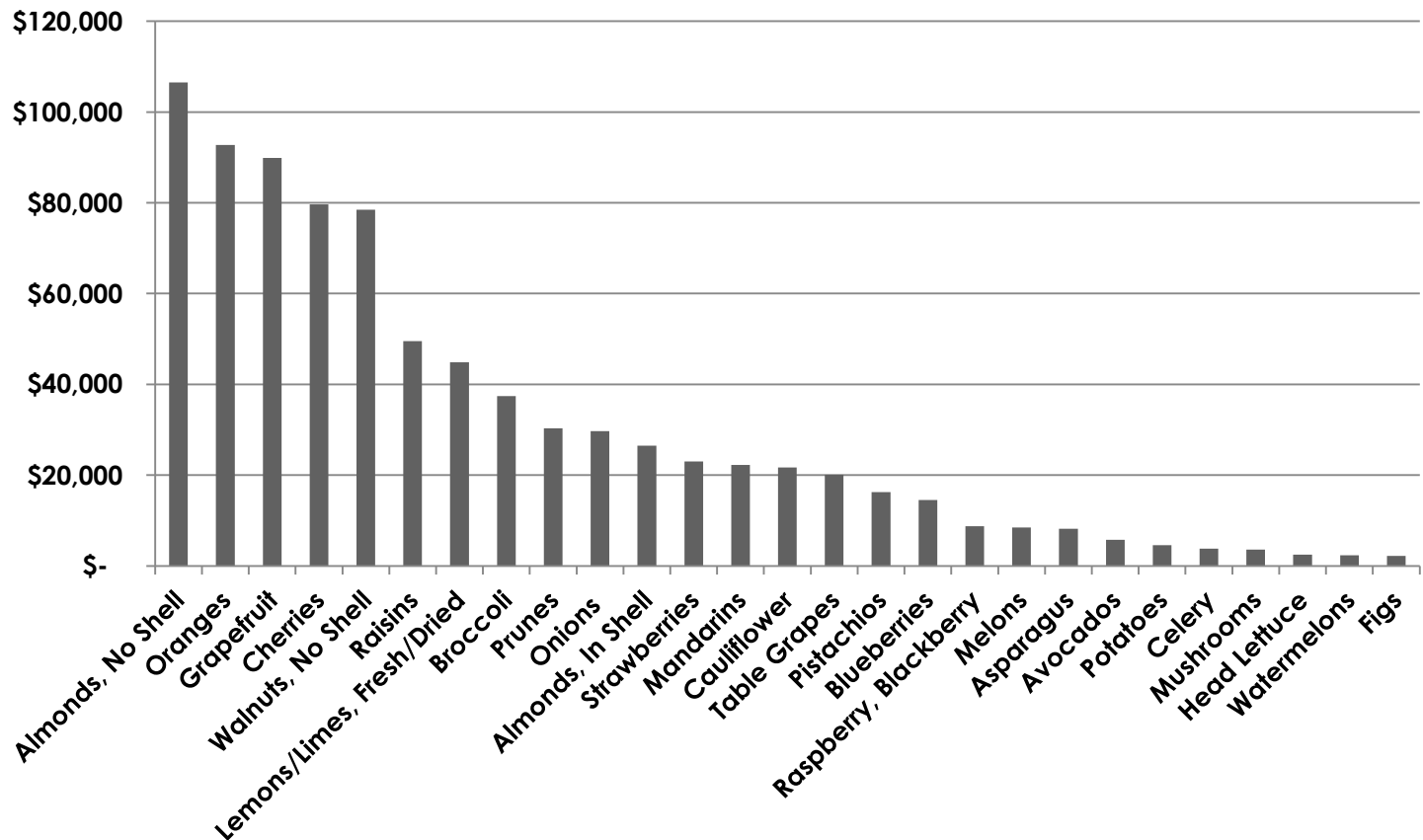
# Export Markets for California Fresh Oranges

## CCQC





# Value of CA Exports to Japan (in 1,000 dollars)



Source: Department of Commerce/ U.S. Census Bureau Foreign Trade Statistics



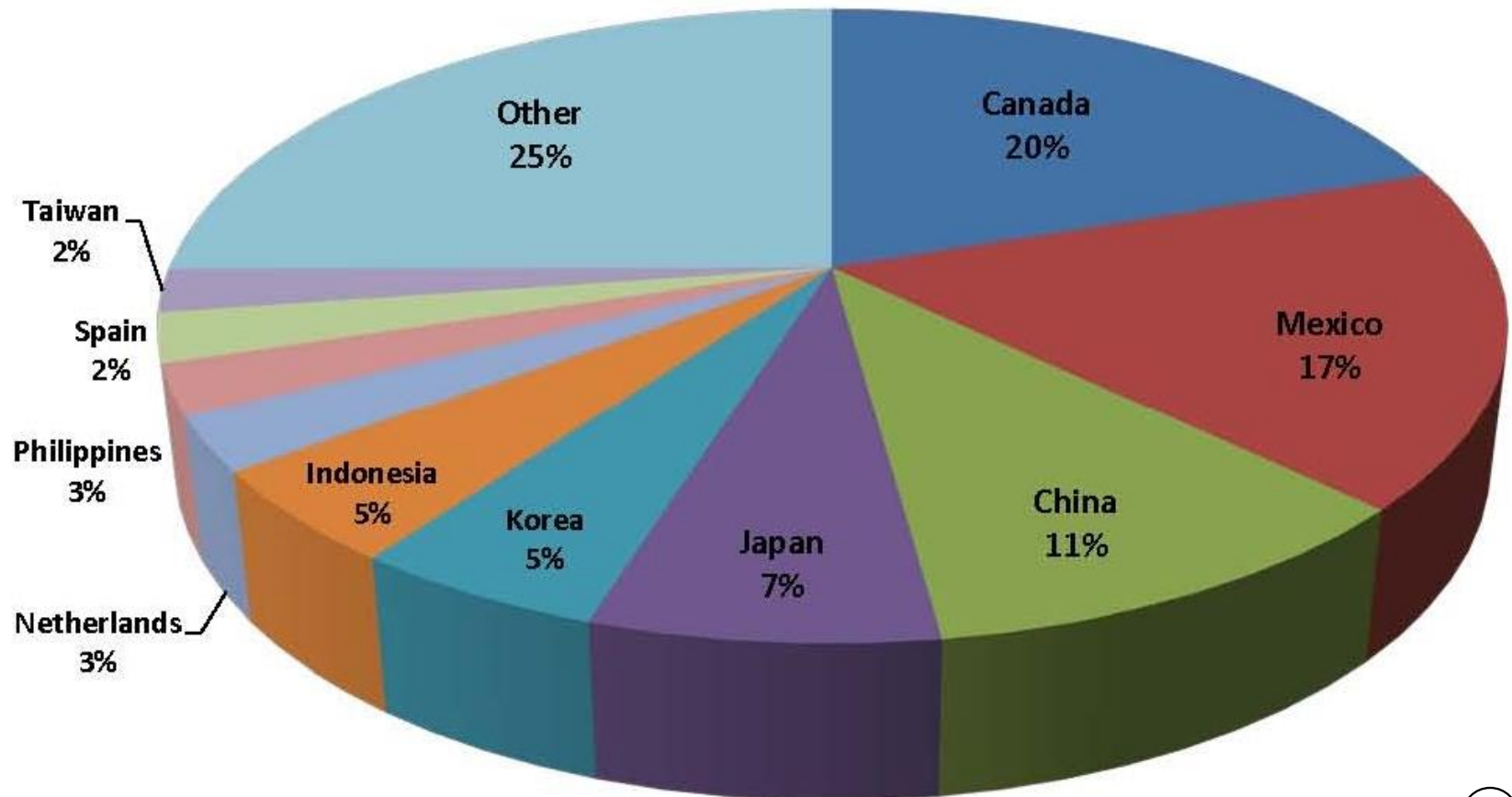


- The Coca-Cola Company
- Huge Global Presence
- Largest Provider of Juices and Juice Drinks in World
- Food Ingredients – Ag Products
- Products Sold in >200 Countries





# Top Export Markets for Idaho Ag Products



# Top Exports - Idaho



- Wheat
- Feed Grains and products
- Fruit
- Vegetables
- Animals and meat
- Dairy
- Mint





# Factors Influencing Exports



- Successful Market Development Efforts
- Favorable Exchange Rate
- Trade Agreements
- Growing Consumer Demand
- Strong Commodity Prices





# Global Efforts to Improve Food Safety



- Worldwide trend...
- Sovereignty of nations
- Mature regulatory systems
- New science
- United States – Food Safety Modernization Act
- US to expand presence in key markets with increased inspections



# Trade Barriers



- Tariffs and quotas (WTO successful intervention)
- Phytosanitary (SPS) food safety barriers
- Export challenges – MRLS
- Emerging markets with new regulatory frameworks
- Food safety incidents – e.g., China





# **MRL = Tolerance**

## **A Regulatory Standard**



‘Maximum Residue Level’ (MRL)  
Upper legal level of a pesticide residue  
based on good agricultural practice and  
the lowest consumer exposure  
necessary to protect  
consumers.

“Safety Valve”





## How is an MRL derived?

- An MRL is set for a defined combination of a crop and an active ingredient
- Defined number of residue trials conducted according to the label/ Good Agricultural Practice (GAP)
- Residue trials run according to label/ GAP



# Changes in International Regulations

- Developing countries economies (BRIC)
- More regulations
- Greater compliance requirements
- Regional initiatives
- New regulations and authorities
- Use of Codex varies – important for some but not for others

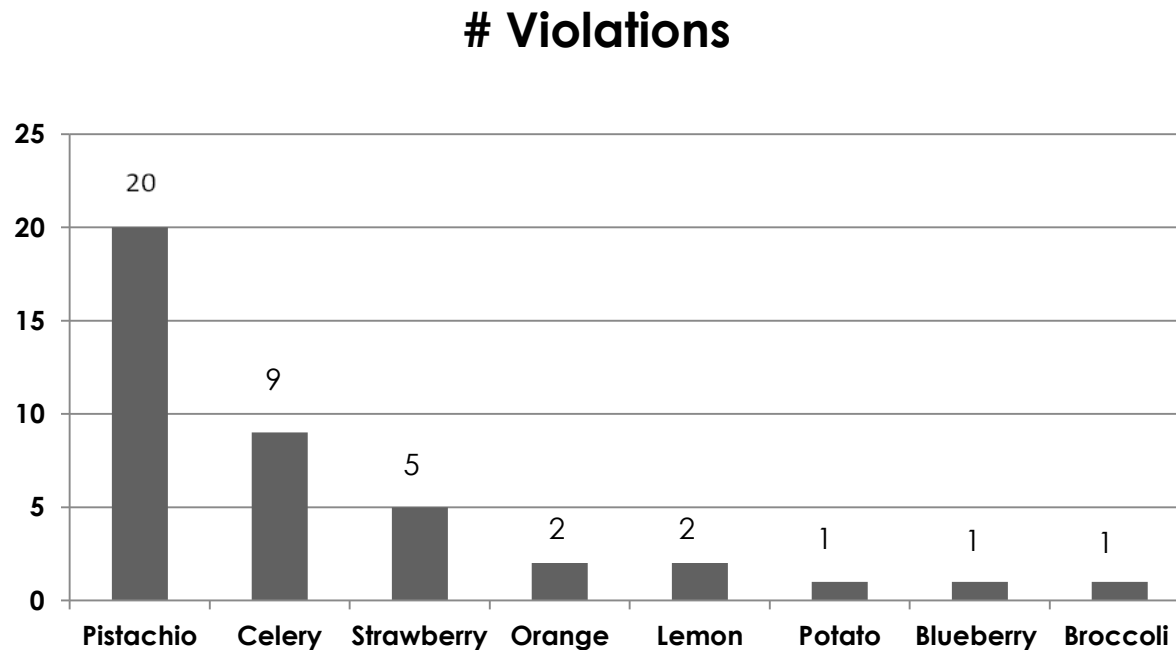


# What Happens When There is a Violation?

- Test and hold product
- Restrict product
- Product perishes or is destroyed
- Consumer confidence



# MRL Violations in Japan by Crop 2007-2010



Source: Department of Commerce/ U.S. Census Bureau Foreign Trade Statistics



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# USDA- Foreign Agricultural Service

## *Reactive Approach*

- Put out the fire
- Engage regulatory and trade partners
- Guide enforcement
- Minimize risk
- Develop and improve compliance plans

# USDA- Foreign Agricultural Service

## *Proactive Approach*

- Know the markets
- Know the emerging markets
- Use USDA-EPA MRL database
- Technical dialogue with trading partners
- Coordination with growers, registrants and regulators
- Cooperative work – governments, Codex,



## Example – Orange Juice Carbaryl (SEVIN) – R. Williams

- USDA PDP 585 samples
- 455 non detects
- 130 detects
- Average residue .007 PPM
- Different tolerances and MRLs
  - US                    10 PPM
  - Codex              15 PPM
  - EU                    0.01 PPM
  - Japan                7.0 PPM



# Why are there different MRLs around the Globe?

- MRLs are set on regional/country GAPs
- Different residue definition in the regions
- Differences in crop grouping
- Not all commodities are grown everywhere
- Not all pesticide are registered everywhere
- Residues can be higher in one country than in the other
- Different dietary risk assessments
  - Chronic
  - Acute



# **EPA Being Very Proactive**

- NAFTA
- Regulatory Cooperation Council
- Joint Meeting on Pesticide Residues (JMPR)
- Codex Committee on Pesticide Residues (CCPR)
- IR-4 and long term approaches
- Progress on many fronts



## IR-4

- Vital to US Specialty Crops
- Long term MRL planning
- Crop groups – huge efficiencies
- Global residue study
- Key partner with EPA and USDA-FAS
- Win-win for growers, trade, international cooperation
- JMPR and Codex
- International partners to support common MRL goals

# NAFTA

- North American Work Plan
- Regulatory Cooperation Council (RCC)
- Grower Priorities Database
- PMRA cooperation and strategic initiatives
- New mechanisms of efficiency
- Reduced trade irritants
- Mexico more involved



# Codex

- Standard of WTO
- Accelerated process
- From 8 to 2 years
- Pilot project with new active ingredient
- Review prior to national registration
- Proportionality concept to increase efficiencies
- Coordination with Third World Countries



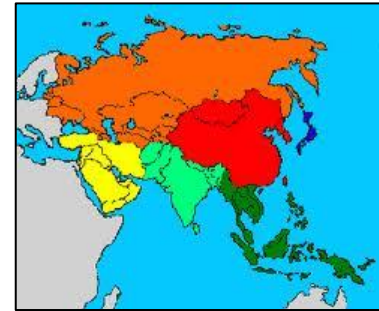
# Emerging Regulatory Agencies/ Regulations

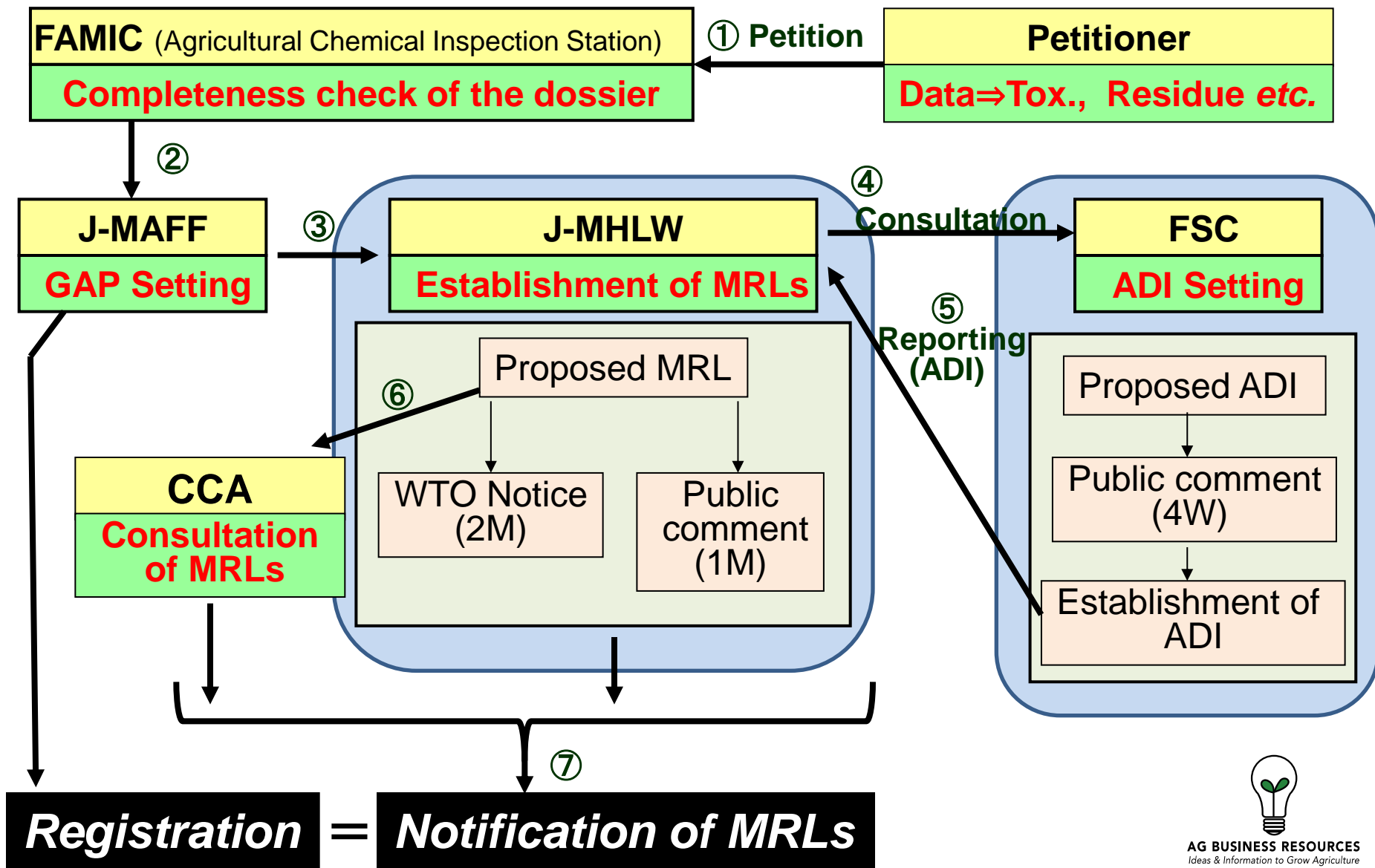
- Asia
- EU
- Harmonization becoming increasingly important
- New systems require more planning and coordination
- Positive lists (Japan)
- In the past FAS and APHIS were lead, now EPA and FDA
- Complex organizations and different cultures



# Asia

- Japan
- Hong Kong
- China
- Taiwan
- Korea
- Vietnam
- Australia
- Thailand
- Singapore
- New Zealand
- Malaysia







# Pesticides Vital to Integrated Pest Management

- Crop production
- Crop protection
- Meeting world food needs
- Globally sourced food system requires flexibility
- Different MRLs in different Markets



# MRLs Challenge Integrated Pest Management

- Move away from science and efficiencies in many cases
- Long delays for registration for new a.i.s
- Movement to reduced risk – lack of MRLs
- Invasive pests – losing flexibility
- Different MRLs in different markets



# Secondary Standards

- Private regulations
- Not based on science
- Consumer driven
- Multiple standards – audit compliance
- Powerful in EU and coming this way
- Increasingly important in emerging economies
- Global Gap, Tesco, Costco, Walmart

# Challenges to Growers and PCAs

- New product registrations – lag time for MRLs
- Retaining older products
- IPM programs being driven by MRLs
- Invasive pests
- Inadvertant residues
- Traceability
- Liability
- Advances in laboratory analyses

# Role of Growers and PCAs

- Identify pest management needs – LONG TERM
- Work with IR-4 and trade organizations
- Know trade flows
- Develop a strategy
- Communicate needs to registrants
- Education
- Regular communications

# **Role of IR-4 and Registrants**

- Understand pest management needs
- Appropriate experimental design
- Manage through Codex and other authorities
- Use crop groups as much as possible
- Share degradation curves of materials
- Support educational workshops and outreach



# Role of Government

- Major advocate for growers
- Improve the process
- Get US priorities on work plans
- Understand pest management needs
- Work with registrants to identify data gaps
- Provide data as needed – registrations
- Provide data as needed – defense
- Agency collaboration – e.g., USDA-FAS, US Embassy





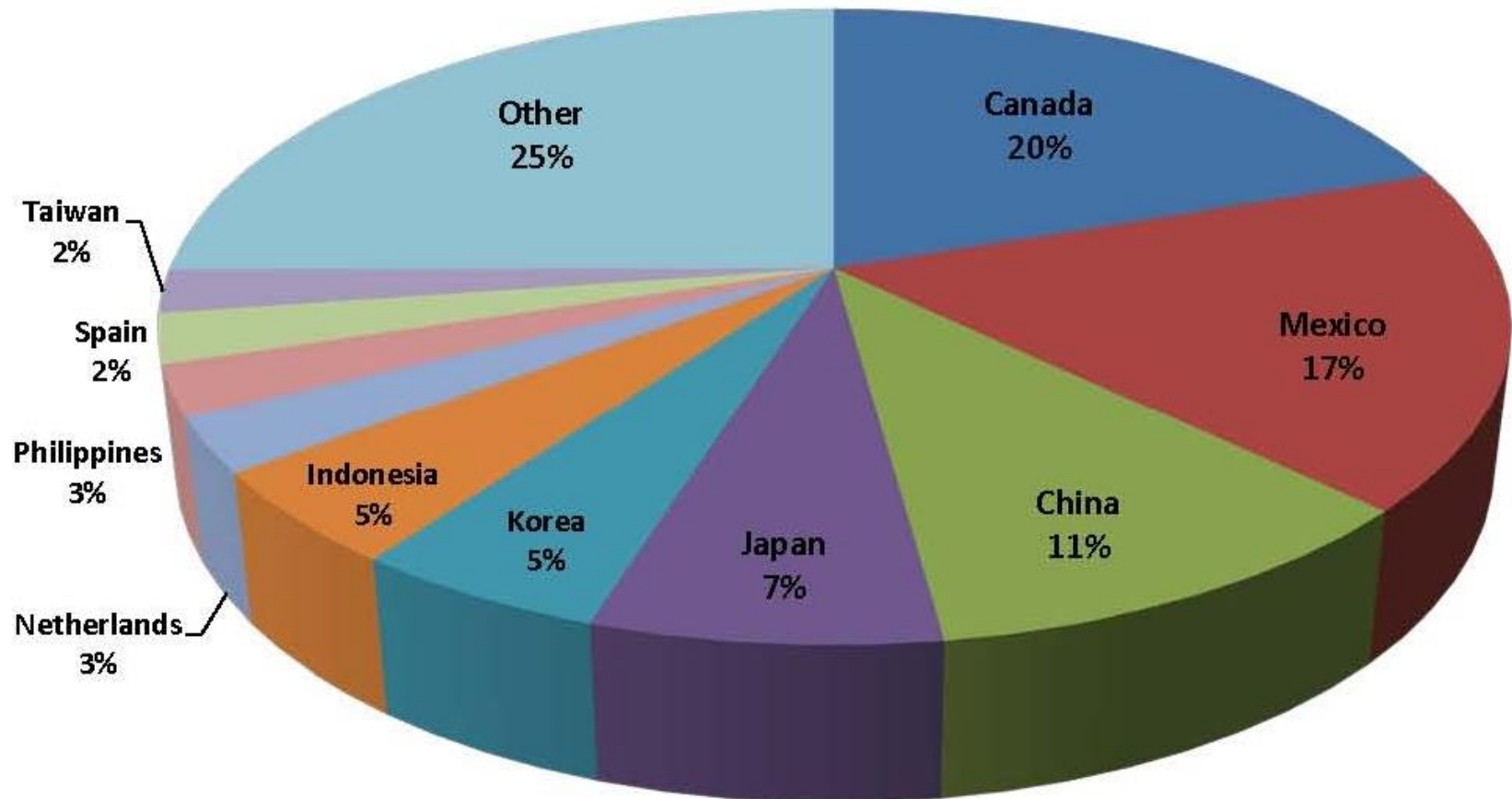


## Practical Tips to Manage MRLs

- Know your customer: commodities, pests, export markets
- Get involved at the R&D phase – start early
- Get to know the commodity or trade organization
- Engage IR-4 and EPA Minor Use Officer at EPA
- Use technology to your advantage
- Educate growers



# Know Your Trade Flows and Related Regulatory Initiatives



# Engagement of Commodity Leaders



- Barley
- Wheat
- Feed Grains and products
- Fruit
- Vegetables
- Animals and meat
- Dairy
- Mint



# Resources for You...

[www.epa.gov/pesticides/minoruse](http://www.epa.gov/pesticides/minoruse)

[www.mrldatabase.com](http://www.mrldatabase.com)

[www.ir4.rutgers.edu/aboutinternationalr.html](http://www.ir4.rutgers.edu/aboutinternationalr.html)

Commodity Groups

Trade Associations

1-800-Ronda Hirnyk







## Summary

- Progress being made on MRL process: Proactive
- Codex system improving, but lacks sufficient capacity
- Process improvements, global joint reviews, crop groupings
- Be aware of emerging regulatory frameworks
- Secondary standards and retailers a real concern; science
- Globally sourced food system requires flexibility
- Communication, cooperation, coordination are key
- Events for future training and outreach



**Thank You**

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