MRL Issues and International Trade
Commodity Perspectives

Idaho Pesticide MRL Workshop

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Boise, Idaho

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AgBusiness Resources
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

Fresh Vegetables: lettuce, asparagus, peppers, carrots, broccoli, onions …..

Fresh Fruit: grapes, oranges, cherries, strawberries, grapefruit, pears, peaches, nectarines …..

Source: USDA, FAS, GATS, Online Data
Value of Fruits, Tree Nuts, and Berries as Percent of Total Market Value of Agricultural Products Sold: 2002

United States 6.9 Percent

U.S. Department of Agriculture, National Agricultural Statistics Service
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.

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

Canada, $150,946
Korea, South, $111,732
Japan, $80,162
Hong Kong, $70,901
China, $27,771
Malaysia, $20,908
Australia, $18,177
Singapore, $13,147
New Zealand, $7,630
United Arab Emirates, $6,438
Other, $37,586

AG BUSINESS RESOURCES
Ideas & Information to Grow Agriculture
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

- Canada: 20%
- Mexico: 17%
- China: 11%
- Japan: 7%
- Korea: 5%
- Indonesia: 5%
- Philippines: 3%
- Netherlands: 3%
- Spain: 2%
- Taiwan: 2%
- Other: 25%
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
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
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
Completeness check of the dossier

FAMIC (Agricultural Chemical Inspection Station)

J-MAFF
GAP Setting

J-MHLW
Establishment of MRLs

Proposed MRL

CCA
Consultation of MRLs

J-MHLW
Proposed MRL

WTO Notice (2M)
Public comment (1M)

FSC
ADI Setting

Proposed ADI
Public comment (4W)
Establishment of ADI

Petitioner
Data⇒Tox., Residue etc.

Registration = Notification of MRLs

Consultation

Reporting (ADI)
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

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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

www.mrldatabase.com

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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Ideas & Information to Grow Agriculture