

WTO Thematic Session on Trade Facilitative Approaches to Pesticide MRLs

“A perspective from the U.S. Pacific Northwest”

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Northwest Horticultural Council

The NHC manages federal and international policy and regulatory issues for growers, packers, and shippers of apple, pear, and cherry in Washington, Oregon, and Idaho.

- 69 percent of the apples
- 87 percent of the pears
- 84 percent of the sweet cherries



The Role of Plant Protection Products in Producing a Sufficient Quantity of Food to Meet Consumer Demand

The FAO estimates that 20 to 40 percent of global crop production is lost each year due to pests; plant diseases cost the global economy \$220B

In the Pacific Northwest, growers must protect fruit from injury by:

- **33 direct insect pests (feed on the fruit)**
- **47 indirect insect pests (feed on the tree)**
- **2 common bacterial pathogens, eight fungal pathogens, ten viral pathogens, and five phytoplasmas and viroids.**
- **Seven postharvest diseases that cause fruit decay and repacking due to postharvest disease costing the fruit industry millions of dollars in losses each year.**



annual cost of in-season crop protection inputs ranges between \$4,500 - \$6,500 U.S. per ha



A Risk-Based MRL Framework is Essential to the Global Trade of Fresh Produce

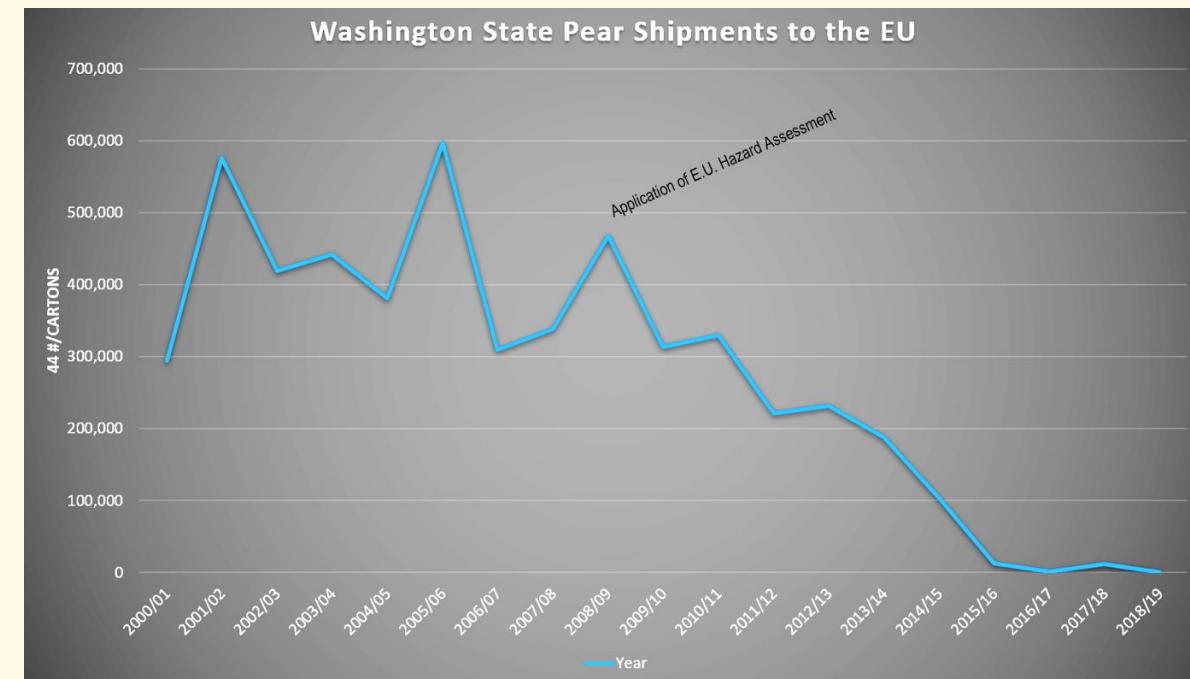
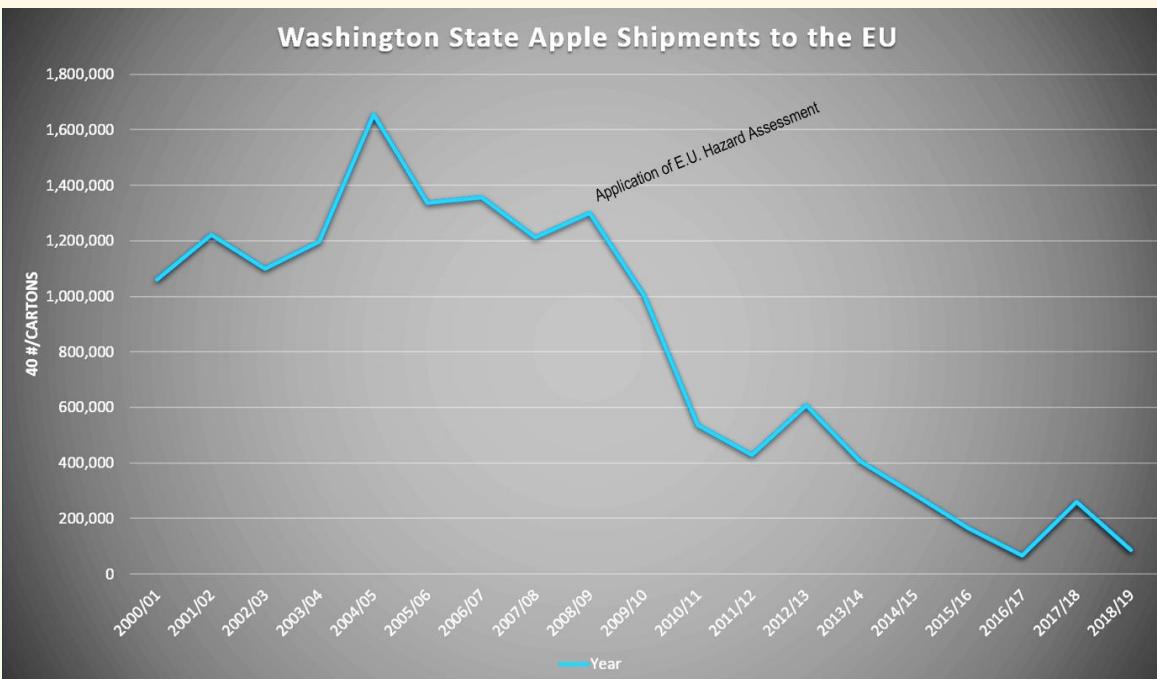
Environmental Protection Agency (EPA) pesticide residue limits are derived from scientifically-based risk assessments that are highly protective of human health and the environment

- Includes a safety factors mandated by law to protect against the special sensitivity of children to pesticides
 - Aggregate exposure through diet, drinking water, and residential uses
 - Cumulative effects to exposure from pesticides with a common mode of toxicity, and
 - Potential endocrine disruption effects
- Risk-based approaches set health-based guidance values for exposure to chemicals
- Hazard approaches assess simple presence of a pesticide at a detectable level in food as a basis for action

When tolerances determined by the EPA differ significantly from MRLs established by foreign governments, trade disruptions become more likely.

Trade Disruption in Fruit Between U.S.A and the European Union Caused by the Disparity Between Risk-Based and Hazard-Based Assessments

- Over 93 percent decrease in shipments of apple from Washington state into the EU since 2009, when the EU began its switch to hazard-based MRLs
- Pear sales to the EU decreased 99.9 percent over same time span



- 43% of EU MRLs for apple are more than 2X lower than U.S.A. residue limits
 - 30% of EU MRLs are more than 5X lower; and
 - 23% of EU MRLs are more than 20X lower.

Harmonized MRLs Set Through Codex Establish Global Standards - Ensure Food is Safe While Facilitating Trade

- Trace detection of pesticide residues using modern analytical chemistry ≠ risk**

EPA residue limits are derived from scientifically-based risk assessments that are highly protective of human health and the environment

- EPA-established tolerances are demonstrably safe for human consumption as verified by 2 gov't surveys of pesticide residue at market points of sale**
- In 2020, > 99% of the foods sampled by the USDA Pesticide Data Program at market points of sale had residues far below EPA tolerances**
- Meeting foreign market phytosanitary requirements requires commercially viable MRLs for crop protection pesticides to ensure that fruit going into foreign markets is free of quarantine pests & pathogens of concern to foreign governments**
- Each country has different environmental growing conditions and pest pressures**

The NHC supports the goals of the Codex Alimentarius Commission to act as a body to protect the health of consumers and ensure fair practices in international food trade through by establishing international standards, guidelines, and codes of practices.

Global harmonization is needed to provide growers/shippers the certainty that shipped product will be accepted in foreign ports

Trade is jeopardized where MRLs are missing or unreasonably low

- 27 percent of Codex MRLs for crop protection pesticides important to our apple producers, 28 percent for pear, and 32 percent for cherry have not been established, and many countries do not accept commodities with residues at Codex levels**
- A significant number of countries are currently in the process of developing their own MRL lists, and/or are presently missing MRLs or are defaulting to MRL values far lower than those set by either Codex or the EPA.**
- Trade with individual countries may also be impacted by buyers within those countries that have their own residue restrictions for pesticide residues that have a high profile in public discussions in those countries, despite approval for use by that country's appropriate regulatory agencies.**

Costs of MRL Compliance

Market access, market competition, & MRLs for export markets must be considered when growers begin a season; in the PNW > 500 people at warehouses, shipping facilities, packinghouses, and in the field every year for the sole purpose of addressing MRL issues.

1 Company w/12 farms - annual residue testing costs~\$18,000 U.S.

PNW fruit growers annually fund field-based research to provide growers information on how to apply crop protection products to meet foreign market MRLs

- **Each rejected load can cost between \$30,000 and \$40,000 U.S**
- **Redirecting shipments costs (when possible) ~ \$4,000 in shipping – increases chance of rejection in 2nd port - losses due to decline of fruit quality ~ \$6,000 U.S.**
- **If the shipper is unable to divert the shipment - additional costs of removal and destruction of the fruit**
- **Whether or not to continue with additional shipments to that destination**
- **Loss of future market access**
- **There is no arrangement or insurance that guarantees compensation for specified loss or damage incurred to financially-injured parties**

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Chemical	Common Name	U.S./Mexico	Codex	Canada	China	Hong Kong	India	Indonesia	Saudi Arabia	Chinese Taipei	Thailand	UAE (Dubai)	Vietnam	Guatemala	Colombia
		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Bifenthrin	Bifenture	0.5	n	0.1	0.5	0.5	0.5	n	0.01	0.5	0.01	0.01	n	n	n
Chlorantraniliprole	Altacor	1.2	0.4	0.4	2	1.2	0.01	n	0.4	0.5	0.4	0.4	0.4	0.4	0.8
Clothianidin	Belay,	1	0.4	0.3	0.4	n	0.01	n	0.4	1	0.4	0.4	0.4	0.4	0.4
Cyclaniliprole	Harvanta	0.3	n	0.3	n	n	n	n	0.01	0.3	n	0.01	n	n	n
Cyflumetofen	Nealta	0.3	0.4	0.3	0.4	n	0.01	n	0.4	1	0.4	0.4	0.4	0.4	0.4
Cyfluthrin	Renounce,	0.5	0.1	0.1	0.5	0.5	0.01	0.1	0.1	0.5	0.1	0.1	0.1	0.1	0.1

- The NHC compiles and maintains MRL databases for our membership
 - 99 pesticides for which MRLs are a concern
 - 66 export markets for apples, pears, and/or cherries
 - a comparison of MRLs in top export markets
- The NHC is a non-profit incorporated company, staffed by 8 personnel - a substantial portion of NHC staff time and budget is spent addressing MRL issues and other trade barriers for our membership.

CONCLUSIONS

- **Hazard-based assessments have resulted in extremely low MRLs that have resulted in sharp declines in trade with those countries**
- **Many markets have missing or default MRLs set to around the current limit of detection for most pesticides, a level so low that it has no scientific value in food safety determinations**
- **With trading partners where there are no or few established MRLs for chemicals of interest to NHC growers/shippers, uncertainty dominates trade.**
- **There are very high economic costs to meeting MRL compliance & immense commercial risks borne by exporters resulting from global MRL disharmony**
- **The NHC is supportive of a transparent, predictable risk-based process of MRL harmonization through Codex. Agreement by countries with no and/or missing MRLs to defer to Codex would strengthen trade with these countries**

