

The Protectionism of Food Safety Standards in International Agricultural Trade

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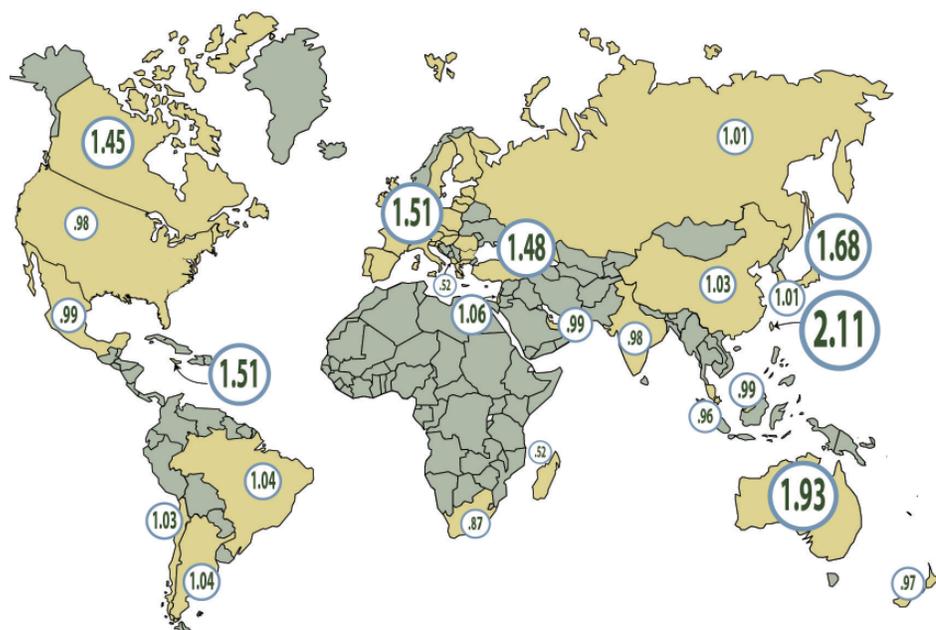
PROTECTIONISM IN agricultural trade takes many forms from taxes and red tape at the border, to so-called non-tariff measures such as agricultural and food safety standards that exceed those recommended by international public health bodies. The World Trade Organization (WTO) does not set standards but strongly encourages member countries to use internationally accepted science-based standards whenever available. The WTO's Sanitary and Phytosanitary (SPS)

Agreement promotes harmonization of sanitary and phytosanitary measures and alignment on international standards, in short, they encourage countries to use the same standards as one another in setting their country's trade regulation to keep trade opportunities fair. The SPS agreement designates Codex Alimentarius, a joint body of the World Health Organization and the United Nations Food and Agriculture Organization, as the organization defining standards for food

safety. The WTO allows its members to vary from the Codex standards for a product, as long as the standards in its place are science based (evidence of a risk from the regulated substance), non-discriminatory (similar products of all origins treated similarly), and least-trade restrictive (no unnecessary trade impediments). Thus, a country that does not use the Codex standard to regulate its trade does not necessarily indicate protectionist motives, but the Codex standard provides an important baseline for assessing protectionist outcomes.

Protectionism Indices:

A comparison of international residue standards to individual country standards. An index of 1 suggests a lack of protectionism. The higher the index the more protectionist the country's standards.



Country	Indici	Country	Indici	Country	Indici
Taiwan	2.11	Brazil	1.04	Mexico	0.99
Australia	1.93	Argentina	1.04	United States	0.98
Japan	1.68	Chile	1.03	India	0.98
Jamaica	1.51	Russian Federation	1.03	New Zealand	0.97
European Union	1.51	Rep. of Korea	1.01	Singapore	0.96
Turkey	1.48	China	1.01	South Africa	0.87
Canada	1.45	Malaysia	0.99	Sri Lanka	0.52
Israel	1.06	Unit. Arab Emirates	0.99	Albania	0.52

This article reports on recent research completed on the potential protectionist effects of maximum residue limits (MRLs) for pesticides (and a few veterinary drugs) established by individual countries in global agricultural and food trade. Countries set the MRL for specific pesticides or drugs and for specific agricultural and food items. Countries also define a set of default values which are used for pesticides or drugs that are not explicitly regulated as regulation trails behind new pesticide and drugs.

To provide insight into the potential for protectionist effects of the MRL standards set by countries, we designed and computed aggregated indices of protectionism for these MRLs based on the percent deviation of a country's MRL from the Codex standard. The indices allow for aggregation over MRLs and commodities and comparison across agricultural products and countries. One important property of these measures is that the indices increase more than proportionally with

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increasing protectionism in MRLs to reflect the increasing difficulty to meet more stringent standards.

For pairs of chemicals and agricultural products for which a Codex standard exists and a country's MRL for that particular pair is set to be more stringent than the corresponding international standard, the index indicates protectionism (a value above 1). Vice versa, lax standards are anti-protectionist and the index value then falls below 1. The research did not consider MRLs for which Codex does not set an international standard, as the science is being established or risk may not exist.

The data used come from USDA Foreign Agricultural Service. The database used values for 2012 and had 19,486 pairs of pesticides and products for 83 countries with a total of over 1.6 million records. The pesticide MRL data swamps the veterinary drug MRLs in coverage with only about 9,000 veterinary drug records. In the analysis, the database is trimmed to about 400,000 usable observations for 77 countries by removing redundant data and observations without corresponding Codex standards. Here, we focus on pesticides as they drive results when using both pesticide and veterinary drug MRLs. We also limit the discussion to country level protectionism indices and refer the interested readers to our detail report for commodity level results.

Among the countries included in the data, 29 countries completely comply with Codex standards; 18 countries comply with EU standards; 7 countries defer to exporting countries standards; 5 countries comply with Gulf Cooperation Council (GCC) standards; and Mexico adopted U.S. standards. Finally, 22 countries set their own standards only or have standards partially combined with Codex or EU standards.

The table summarizes results on each country's protectionist indices. Australia, Japan, and Taiwan come out as the most protectionist countries. This is largely due to the fact that they have stringent default values for MRLs that they do not explicitly set (zero or near-zero tolerance when an MRL is not explicitly specified) and because they have many non-established MRLs. In addition, Australia and Taiwan have stringent established MRLs. In contrast, Japan actually is slightly anti-protectionist (the index is below 1) when computing the index solely using established MRLs. Russia and Brazil come out as systematically protectionist because of stringency on established MRLs but much less because of default MRLs which are lax. They have a large number of non-established MRLs, which dilute the presence of the limited number of established MRLs and their associated protectionism.

The EU, Turkey, and Canada are also among protectionist countries

because they have both tight default and established MRLs that are stricter than Codex. Interestingly, a few countries, including South Africa, Sri Lanka, and Albania have MRLs set much below Codex MRLs with the consequence of potentially under-protecting the health of their consumers from harmful residues.

None of these two measures provides a better measure of protectionism than the other. Rather they both shed light on two ways to be protectionist, one by actively over-regulating specific pesticides, and the other with a blanket policy that could be relaxed once a specific MRL is issued for a formerly unregulated pesticide.

The standard deviations of the indices tend to be small (this data can be found in the full paper cited below.) The research did not unveil evidence of countries being non-protectionist "on average" by offsetting a few very protectionist MRLs or markets with anti-protectionist ones. This finding is consistent with the observed small standard deviations across products within any country.

For further information and detail on the inquiry see Li, Yuan, and John C. Beghin "Protectionism Indices for Non-Tariff Measures: An Application to Maximum Residue Levels," Economics department working paper No. 12013, 2012. Forthcoming in *Food Policy*. ■