BRYANT CHRISTIE INC.
GLOBAL SOLUTIONS

Impact Assessment of EU MRL Restrictions on the Americas' Agri-Food Exports

Prepared by Bryant Christie Inc. for the
Inter-American Institute for Cooperation on Agriculture

October 15, 2026

EXECUTIVE SUMMARY

The European Union (EU) intends to tighten its rules on how it treats pesticide residues on imported foods. This is driven by the European Commission's 2025 "Vision for Agriculture and Food" which committed to the principle that hazardous pesticides banned domestically should not reenter the EU through imports. In support of its commitment, the EU Commission launched a study to assess the impact of pesticide residues in imported food, evaluating whether standards applied to imports should align more closely with those applied to EU growers, with the aim of improving EU producer competitiveness. Findings from the assessment will inform decisions on import tolerances and on retaining or withdrawing EU maximum residue levels (MRLs) for substances no longer approved in the EU.

In parallel, in December 2025 the EU adopted a proposal Food and Feed Omnibus Simplification Package (also referred to as Omnibus X) that would amend the EU's pesticide and MRL regulations. Under the proposal, substances meeting the EU's hazard-based cut-off criteria would have their MRLs set at the limit of quantification (LOQ), eliminating import tolerances based on third-country or Codex standards. Moreover, the cut-off criteria would extend to environmental hazards, meaning an MRL could be lowered even in the absence of any risk to human health. This marks a departure from the risk-based approach used by many countries and by the Codex Alimentarius.

To inform its policy direction, in August 2026, the EU released a Joint Research Centre (JRC) study *Assessing the Economic Impacts of Stronger Alignment of Production Standards Applied to Imported Products on the EU's Agricultural Sector*. This report applied several scenarios evaluating various levels of exporter adaptation, all resulting in various degrees of reduced imports, higher EU production, and higher EU consumer prices if this policy moves forward as proposed. The JRC report is not a comprehensive impact assessment; it is only meant to highlight the potential impact to the market of the proposed changes to the MRL policy outlined in Omnibus X.

To better understand the potential impact of Omnibus X on exporters in the Americas, the Inter-American Institute for Cooperation on Agriculture (IICA) commissioned this assessment. It draws on EU tariff line data (HS-8), reported by Eurostat to UN Comtrade, using a three-year average (2022 - 2024). For a given country or region in the Americas, this average is used to identify the top 20 commodity categories the EU imports from said country or region. Each commodity category is then evaluated for its potential loss of MRLs under Omnibus X and sorted into a dependency tier (low, moderate, high, or critical) based on the percentage of that category's exports bound for the EU. Building on this, the assessment estimates value at risk for the top 20 commodity categories potentially impacted by the EU policy change (i.e., commodities with an associated MRL projected to become more restrictive).

This report is organized first by highlighting the current policy actions taking place in the EU, methods used to conduct trade and MRL analysis, then highlighting trade value for the Americas and by region, then reviewing trade value, dependency and insight into MRLs for each market in the Americas, and finally concluding with recommendations.

Methodology Limitations

This assessment has some key limitations worth noting to avoid misinterpretation.

- Some HS-8 codes used in this analysis are catchall entries covering multiple or undefined commodities, which can obscure the exact commodities imported by the EU. As a result, MRL risk flagged for a market may include commodities that a given market does not actually

export. Confirming which commodities within a given HS-8 code were actually exported to the EU would require additional market research.

- This study lacked country level data on pesticide registration and usage. As this is typically not publicly available, MRLs were used as a proxy for registration to evaluate potential MRLs at risk per commodity in a market.

- The study did not consider producers' decisions in efficacy, resistance management, alternative products, costs, and residues. Rather, it is assumed that if an MRL is restricted it may affect growers of all or some commodities. Also, the MRLs might not reflect the complete range of pesticide products available to a grower.

- Codex MRLs were used for markets without established domestic MRLs, limiting analysis for this assessment.

- The EU and United Kingdom are currently negotiating an SPS agreement that would realign UK MRL and pesticide policy to that of the EU. This assessment does not consider exports to the UK, as the details of that negotiation are not final at this time.

Additional limitations are detailed within the body of the report.

Findings & Recommendations

This assessment reviewed 151 active substances. Of these, 23 remain approved for use in the EU but may face concerns during renewal of approval. 88 of the 151 active substances were excluded because all of their EU MRLs are already at, or scheduled to move to, the default or LOQ levels, or are not listed (paraffin oil). The remaining 63 have at least one EU MRL above these levels. A further reduction of MRLs for these 63 substances would have a meaningful impact on trade between the Americas and the EU. Even for substances where the MRL is already at default or LOQ, the inability to request new import tolerances also restricts market access, albeit its quantification is harder to account for and was not considered in this assessment.

Many countries in the Americas face high exposure to changes that could affect their market access, particularly for products such as bananas and coffee, which are not widely grown in the EU and for which the EU relies heavily on imports to meet domestic demand. The assessment identified several countries with specific commodities with critical dependence on trade with the EU: Belize (sugar cane); Costa Rica (pineapples, bananas, and palm oil/nuts); Dominican Republic (bananas, cocoa, and mangoes); Honduras (coffee and palm oil/nuts); and Panama (bananas, melons, and pineapple).

The impact of EU MRL policy changes would not fall evenly across the Americas. About 13% of the exports assessed are destined for the EU, placing the region as a whole at a moderate level of dependency. North America is the least dependent (6.7%), while Central America (28.1%) and the Caribbean (27.5%) are the most dependent. South America has the largest value of exposed trade ($29.7 billion), with nearly 17% bound for the EU. Six countries fall into the critical tier, each sending more than 30% of its assessed exports to the EU: Guyana (42.7%), Honduras (39.0%), Panama (37.1%), Costa Rica (35.6%), Belize (31.8%) and the Dominican Republic (31.5%). Costa Rica stands out, combining critical dependency with a large value at risk ($1.63 billion). Peru ($2.84 billion), Colombia ($1.97 billion) and Ecuador ($1.26 billion) are close to the critical threshold, at 28–29%. Central America, together with the six critically dependent countries and the near-critical exporters Peru, Colombia and Ecuador, is therefore likely to be the most affected by changes to EU pesticide and MRL policies.

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INTRODUCTION – EU POLICY BACKGROUND

The European Union (EU) sets maximum residue levels (MRLs) for pesticides in food and feed under Regulation (EC) No 396/2005. In the absence of an established EU MRL, the default 0.01 ppm applies. For imported commodities, this framework has allowed MRLs to be set through import tolerances that reflect authorized uses in third countries or Codex Alimentarius standards, provided the resulting residue level is not considered a risk to EU consumers. Separately, Regulation (EC) No 1107/2009 governs the approval of pesticide active substances for use within the EU and establishes the hazard-based "cut-off" criteria that include mutagenicity, carcinogenicity, toxicity for reproduction (category 1A/1B), endocrine-disrupting properties, classification as a persistent organic pollutant (POP), and persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB) properties. These criteria are used to classify a substance as one of the "most hazardous" pesticides.

These two regulations apply different assessment methodologies. Regulation (EC) No 396/2005 has traditionally set MRLs on a risk-based basis: a given residue level is evaluated against an estimate of actual consumer exposure to determine whether it poses a measurable risk. Regulation (EC) No 1107/2009, by contrast, applies a hazard-based approach to substance approval: once a substance is found to meet one of the cut-off criteria listed above, approval is withheld regardless of the level of exposure or the results of a quantitative risk assessment. This hazard-based approach differs from the risk-based methodologies used by the Codex Alimentarius and by many national regulatory authorities outside the EU, and it is one of the reasons a substantial number of substances have failed to gain or retain EU approval even where their continued use elsewhere has been supported by a favorable risk assessment.

In 2025, the European Commission's "Vision for Agriculture and Food" committed to establishing a principle that "…the most hazardous pesticides banned in the EU for health and environmental reasons are not allowed back to the EU through imported products."[1] To support this commitment, the Commission formally launched a study on pesticide residues in imported food. The assessment's stated purpose is to evaluate whether the standards applied to imported products should be aligned more closely with those applied to EU growers, with the aim of improving EU competitiveness. Findings are intended to inform policy on import tolerances and on the retention or withdrawal of EU MRLs for active substances that are no longer approved for use in the EU.

On 16 December 2025, the Commission adopted a proposal for Food and Feed Safety Simplification Package, also referred to as "Omnibus X," which would amend, among other acts, both Regulation (EC) No 1107/2009 and Regulation (EC) No 396/2005.[2] While the package addresses a range of issues, the current assessment focuses specifically on the package's proposed restriction of MRLs for substances deemed hazardous under Regulation (EC) No 1107/2009.

Under the proposal, substances that meet the EU's cut-off criteria would have their MRLs set at the limit of quantification (LOQ), and import tolerances based on third-country authorized uses or Codex Alimentarius standards would no longer be permitted for those substances. This would be implemented through an amendment to Article 14(2) of Regulation (EC) No 396/2005, allowing

[1] European Commission, *A Vision for Agriculture and Food – Shaping Together an Attractive Farming and Agri-Food Sector for Future Generations*, COM(2025) 75 final, 19 February 2025, p.13, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52025DC0075.

[2] European Commission, *Food and Feed Safety Simplification Omnibus*, COM(2025) 1030 final, 16 December 2025, https://food.ec.europa.eu/document/download/b0817113-6edc-4219-b638-8060fee037d5_en?filename=horiz_omnibus_reg-com-2025-1030_en.pdf.

MRLs to be lowered to the LOQ even when the current MRL is otherwise considered safe for EU consumers. Of note, the proposal expands MRL restrictions to include environmental hazards, which would allow an MRL to be restricted even when a substance poses no direct risk to human health. At the time of writing, the proposal remains under examination by the European Parliament and the Council.

Under the proposal, this hazard-based logic would apply directly to import tolerances. MRLs for a substance meeting the cut-off criteria could be set at the limit of quantification even where a risk assessment indicates no resulting health or environmental concern at the residue levels found in trade. This marks a departure from the risk-based tradition that has governed MRL-setting under Regulation (EC) No 396/2005, and the effect is compounded by the proposal's extension of the cut-off criteria to environmental hazards. Because the environmental properties at issue, such as persistence or bioaccumulation, are generally assessed by reference to conditions within the EU, some stakeholders have raised concern that applying an environmental cut-off to imported products extends EU regulatory standards beyond the Commission's mandate, in effect applying EU environmental policy extraterritorially to production practices and ecosystems outside EU jurisdiction.

To support the Commission's impact assessment, the Joint Research Centre (JRC) produced a report, *Assessing the Economic Impacts of Stronger Alignment of Production Standards Applied to Imported Products on the EU's Agricultural Sector* (JRC147659, 2026). The report, published on August 11, 2026, reviewed 976 active substances not approved in the EU, of which 80 meet the most hazardous criteria. Of these 80, 18 pesticide active substances are not approved for use in the EU but retain at least one commodity-specific MRL above the LOQ and have documented evidence of use outside the EU. These 18 substances are associated with MRLs above the LOQ for 235 commodities and trade with 86 exporting countries. Using the CAPRI global agro-economic model, the JRC simulated three scenarios bracketing a range of possible exporter responses to a reduction of these MRLs to the LOQ. Under a scenario assuming no exporter adaptation, total EU agricultural imports were projected to fall by 41% overall, with EU production and EU consumer prices rising in parallel. Under an intermediate adaptation scenario, imports were projected to fall by 8%. Under a lower-bound scenario assuming low-cost exporter adaptation, the projected decline in imports narrowed to just 0.4%. Across all three scenarios, the direction of impact was consistent: imports decline, EU production rises, and EU consumer prices increase, although the magnitude depends heavily on assumptions about exporters' ability and willingness to adapt.

These scenarios reflect the EU's goal of aligning the standards applied to imported products with those applied to EU production. However, while the EU seeks to restrict imports of products with residues of substances no longer approved in the Union, EU growers have continued to use some of these substances through emergency authorizations under Article 53 of Regulation (EC) No 1107/2009. Article 53 allows member states to authorize a plant protection product for up to 120 days, for limited and controlled use, where a danger cannot be contained by other reasonable means. To gauge how widespread this use is, this assessment reviewed EU emergency authorization data for 2016–2026 for all non-approved substances in scope in this study (see Appendix A for full substance list). Of these 128 substances, 50 received at least one emergency authorization in the time period.[3] Thiamethoxam received 108 authorizations across 17 member states and both clothianidin and imidacloprid received 65 authorizations each across 14 and 12 member states respectively. In total, there were 822 emergency uses granted for the substances under scope in this study. Although emergency authorizations are time-limited and restricted to limited and controlled use, these figures

[3] European Commission, EU Pesticides Database, "Search for Emergency Authorisations," (data queried 30 September and 5 October, 2026).

show that substances targeted by the proposed MRL policy change have remained in use within the EU (see Appendix B for emergency use list).

Complementing the JRC's EU-focused analysis, this assessment examines how the proposed change to EU MRL policy could affect exports from the Americas to the EU, with particular attention to the commodities and trading partners most exposed to, or dependent on, EU market access.

This assessment examined 151 active substances, of which 23 remain approved for use in the EU but may face concerns when their approval comes up for renewal. Of these 151 active substances, 88 already have all their corresponding EU MRLs set at the default level or the LOQ. This assessment focuses on the remaining 63 active substances from the initial 151 active substances that still have at least one EU MRL above the default or LOQ level, since these are the substances for which a further MRL reduction would have a meaningful effect. It is also important to note that, although the impact cannot be quantified at present, limiting the possibility of requesting import MRLs for substances not approved in the EU is itself trade-restrictive, because future MRL needs may not be addressed under the new policy.

EU import tolerances or MRLs that remain in effect after a substance is no longer approved for use within the European Union allow trade to continue from the Americas to the EU. This allows growers in the Americas to make production decisions based on their domestic authorities' pesticide registration decisions, together with agronomic factors such as pest pressure, resistance management, crop rotations, product availability and cost, and environmental conditions.

Of note, the EU and United Kingdom (UK) are currently negotiating a Sanitary and Phytosanitary (SPS) agreement under which the UK would once again align its pesticide and MRL policies with the EU's. In practice, this means all EU MRLs would also apply in Great Britain and would be updated as EU rules change, subject to any exceptions agreed in the negotiations. Since Brexit, the UK has set a number of its own MRLs at levels that are more trade-facilitating than the EU's, an SPS agreement that realigns the UK with EU would eliminate that divergence. Because negotiations are still ongoing, details on implementation are not yet available, though the UK government expects the agreement to take effect by mid-2027. This assessment does not cover UK trade, but once such an agreement is in force, the impact of the Omnibus X MRL changes on Americas exporters would extend to the UK market as well, compounding the exposure already identified here for the EU.

ANALYSIS FRAMEWORK

This assessment covers all countries within the wider Americas. Each country and region is evaluated for the potential impact of the proposed changes to EU MRL policy. The overall framework is a trade-data-guided assessment, using trade data to identify each exporter's most relevant commodity categories. Domestic MRLs for these top categories are then evaluated against EU MRLs to determine potential policy impact.



Portions of this report's initial data categorization and analysis were supported by Claude Sonnet 5 (Anthropic), including HS-code commodity categorization, MRL-to-value-at-risk conversion, and Power Query output verification. In each case, BCI staff reviewed, refined, and made final determinations. All findings, interpretations, and conclusions in this report have been reviewed and verified by BCI staff.

The sections that follow outline the assessment's methodology in greater detail.

Trade Data

Trade data were obtained from UN Comtrade, the United Nations Statistics Division's global database of official trade statistics, compiled from national customs reports by Harmonized System (HS) code and partner country. For the EU, UN Comtrade sources its data from the EU's official database, Eurostat.

EU import value data (in US dollars) rather than partner-country export value data is used, as EU customs reporting is generally more complete and consistent than export declarations from many countries in the Americas. This approach also directly reflects what cleared EU borders, which is the relevant measure for this assessment.

This assessment uses the average import value as reported by the EU across 2022, 2023, and 2024. References to trade value in this report can be assumed to be an average for these three years unless otherwise noted. While 2025 trade data is available for the EU, it was not yet available for other key markets like China at the time of this report's development (which is required for calculating trade dependency), necessitating the use of the three years noted previously. Notably, for clarity, this assessment often uses the term 'exports' when discussing trade from a specific country bound for the EU. This should be assumed to refer to the import calculation described above and is used as a shorthand for reader comprehension.

Commodity Categories

To calculate the metrics outlined below, a basket of HS-6 agri-food codes subject to MRL policy was defined, extending to EU-specific HS-8 codes where necessary. These codes are categorized into

broad commodity categories that reflect agricultural industries, such as citrus, soybean, or wheat. Additionally, more specific categories are nested below the broad categories, which allow for the more detailed MRL analysis described below. For example, the citrus category has oranges, limes, etc. nested within it.

Limitations of Trade Data

Data Corrections & Errors

While UN Comtrade is one of the world's premier trade data vendors, figures are subject to periodic revision after initial publication, and changes in HS code classifications over time can introduce minor discontinuities within a multi-year average. This assessment mitigates the latter by matching each HS-6 and HS-8 code to the official HS code description used in its corresponding year, ensuring consistency across the averaging period.

Multi-Year Averaging & Data Smoothing

The use of a three-year average (2022-2024) provides a more stable baseline than any single year, smoothing out fluctuations from one-off disruptions to agricultural output or shipping. This, however, comes with a tradeoff: averaging can mask more recent shifts in trade patterns, such as a country rapidly gaining or losing export share in a given category. The assessment's approach favors a representative baseline over sensitivity to the most recent year's data.

'Not Elsewhere Stated' HS Code Groupings

Most large commodity groups correspond to a specific HS code, allowing for straightforward mapping of commodity categories and subsequent MRL analysis as outlined in the following section. Lesser traded commodities, however, are often grouped into catchall HS codes that contain multiple different commodities. For example, HS-6 code 070999 covers 'Other Fresh or Chilled Vegetables Not Elsewhere Stated (NES)', which means it encompasses all vegetables not elsewhere represented by a specific HS code.

While the EU's HS-8 codes can provide additional clarity on the contents of these NES HS codes, they frequently do not break the contents down further. In such cases, this assessment's ability to analyze these HS codes is limited for both trade and MRL analysis.

MRL Analysis

The list of active substances for this assessment was provided by CropLife America and includes 151 active substances, 128 of which are not approved for use in the European Union (see the full list in the Appendix). The assessment reviewed the EU MRLs for each active substance and excluded those where MRLs on all commodities are already set at the default level (0.01 ppm) or at the limit of quantification (LOQ). Three substances on the CropLife America list, benomyl, thiophanate-methyl, and carbendazim, were excluded on the same basis, even though their MRLs have not yet formally changed. On July 8, 2026, the European Commission published a final decision[4] restricting all of their EU MRLs to the LOQ, with a transition period running through 29 January 2027. Because that restriction is already final, this assessment treated these three substances as already at default level rather than reviewing them.

[4] Commission Regulation (EU) 2026/1546 of 8 July 2026, OJ L, 2026/1546, 9 July 2026: http://data.europa.eu/eli/reg/2026/1546/oj.

Paraffin oil was also not reviewed as its regulation varies among the countries under review and its corresponding MRLs are not listed in the Regulatory Limits MRL database. After eliminating those active substances, 63 active substances remained from the CropLife America list. Therefore, the assessment focuses on the remaining 63 active substances that still have at least one EU MRL above the default or LOQ level, since these are the substances where a further MRL reduction would have a meaningful effect.

Country specific MRL analysis was based on data from FoodChain ID Regulatory Limits MRL database.[5] MRL analysis was conducted for the top 20 commodity categories for the countries with established domestic MRL lists. Even at the 8-digit level, tariff lines can aggregate relevant and non-relevant commodities that cannot be disaggregated further. As a result, a more stringent MRL may apply to only a small share of the commodities within an aggregated tariff line.

Domestic MRLs were used as a proxy for registration status, since reliable, country-level registration information is not publicly available. Countries in the Americas, namely Argentina, Brazil, Canada, Chile, Costa Rica, Mexico, Paraguay, Peru, and the United States, maintain their own domestic MRL lists. Argentina, Brazil, Chile, Costa Rica, Paraguay, and Peru also accept Codex MRLs in the absence of domestic MRLs to facilitate trade. For the purposes of this assessment, only established domestic MRLs were considered. MRLs adopted through deferral to Codex or other markets, as well as default MRLs, were not treated as domestically registered and excluded from the analysis. For countries that defer to Codex, an illustrative analysis was carried out based on Codex MRLs. However, the relevance of these MRLs for domestic production cannot be estimated.

After identifying the domestic MRLs at risk of restriction, the assessment also counted the total number of domestic MRLs established for the corresponding commodity. This step was intended to show how significant a single at-risk MRL is relative to the full set of MRLs and, by extension, pest-control tools available for that commodity. The loss of one MRL out of only a few is far more consequential than losing one out of many.

MRL policy information and established MRLs for Antigua and Barbuda, Bahamas, Barbados, Guyana, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines were not available in the Regulatory Limits MRL database.

Limitations of MRL Data

As pesticide registration and usage information at the commodity level is not generally publicly available for countries in the Americas, domestic MRLs were used as a proxy for pesticide use in the markets under review. An established MRL at the domestic level may not reflect whether or how widely a substance is used in domestic production. In addition, it does not indicate other factors growers consider when making crop protection decisions, such as efficacy, resistance management, availability of alternative products, cost, and residues. Thus, an MRL that becomes more stringent may not meaningfully affect growers of some or all commodities in practice. At the same time, domestic MRLs may not reflect the full range of pesticide products available to growers, particularly growers of minor crops, who may rely on off-label pesticide use.

A MRL risk value was calculated to evaluate the percent of active substance tools available to a producer that might be at risk of having MRLs removed if the proposed policy were to be implemented. This risk value was calculated by the number of all the established MRLs in a specific market on selected commodities, as an assumption these tools are available to a producer. The total

[5] FoodChain ID Group, Inc., *Regulatory Limits* database (data queried July 1-August 13, 2026).

number of MRLs that have both EU and country specific commodity MRLs was then divided by the total number of commodity MRLs in a specific country. This serves as an estimate of MRLs that might be lost if the proposed policy is implemented, leading to a decrease in tools available to producers.

As mentioned in the above section, on limitations of trade data, HS-8 groupings might not separate the specific commodities out further. Therefore, MRL commodity names were selected based on all commodities listed under the HS-8 code from the trade data. This could mean that some commodities listed might not be produced on a large scale or at all in a specific country but may show up in the MRLs at risk tables in the appendix of this report. For example, when reviewing the Canadian MRLs At Risk table in the Appendix, which shows 25% of guava MRLs at risk of being eliminated, it can be assumed that Canada does not produce or export guava, but maintains MRLs on this commodity. Therefore, in each country section MRL risk analysis focuses on the commodities that were exported in the top 20 categories to EU.

Note these MRLs at risk tables only serve as reference to the number of commodities reviewed per country according to the HS-8 code from the trade data and does not mean that a country exports a significant volume of that commodity, only that MRLs are established on that commodity in that country. These commodities were reviewed because they were represented in the HS 8 trade data, which may include more commodities in a group that cannot be separated out. Additional research would need to be conducted, to evaluate the market for specific production and or estimated exports of certain commodities if relevant.

For countries with no established domestic MRLs, Codex MRLs were used as a proxy, with the exception of Suriname, since it defers to EU MRLs. To illustrate potential impacts, the analysis focused on the commodities that together account for at least 95% of each country's exports to the EU. Comparing these top exports against Codex MRLs identified the substances that could be at risk under the proposal, provided the exporting country actually uses those substances in production. For these countries, however, the assessment is further limited by the lack of any domestic source data.

Consequently, findings may not reflect actual impact, with the potential for under- or over-estimation depending on the crop-country combination.

Key Metrics

This section defines the key metrics used throughout the assessment:

1. **Top 20 Commodity Categories & Trade Value Exposed** - the exporter's largest trade flows to the EU by value.
2. **EU Trade Exposure Tier** - how dependent each commodity category is on the EU market compared to the rest of the world.
3. **Value-at-Risk** - the portion of 'Trade Value Exposed' estimated to be at risk under the proposed changes to EU MRL policy.

Top 20 Commodity Categories & Trade Value Exposed

Rather than evaluating all trade between the EU and a given country or region, this assessment focuses on the top 20 categories, by value, that each country/region exports to the EU. This ensures that the MRL analysis described above is performed on the most relevant commodities for that exporter (i.e., the commodities the exporter derives the greatest value from).

The top 20 commodity categories for a given exporter appear in a table on that exporter's profile page. This table lists each category's name, its rank within the top 20, and its exposure tier to the EU (discussed in the following section). The sum of these top 20 categories' values is the 'Trade Value Exposed' metric, featured in a callout bubble at the top of each exporter profile page. This metric represents the scope of value evaluated for the impact of the EU MRL policy changes discussed above.

As noted above, the 'trade value exposed' metric does not constitute all trade between the EU and the exporter, only that value within scope of this analysis. For many exporters, however, the trade value exposed metric constitutes +95% of relevant trade value between the exporter and the EU. Additionally, it is worth highlighting that the top 20 export categories at the region level are recalculated from the sum of all trade by constituent countries, meaning topline regional 'trade value exposed' is not simply a sum of the 'trade value exposed' of constituent countries.

EU Trade Exposure Tier

The EU trade exposure tier quantifies how dependent each of an exporter's top 20 commodities are on the EU market. Each commodity category is assigned a tier based on what percentage of its trade goes to the EU versus the rest of the world. The equation used to determine the degree of exposure to the EU was calculated using the following equation:

$$\frac{Import\ value\ of\ agrifood\ goods\ to\ the\ EU\ for\ country\ A}{Import\ value\ of\ agrifood\ goods\ to\ World\ for\ country\ A}$$

This assessment calculates said ratio for each country-commodity combination[6]. The percentages this equation yields are then categorized into one of the following exposure levels to determine the degree of exposure to the EU:

1. Low → Less than 5 percent
2. Moderate → Between 5 and 14 percent
3. High → Between 15 and 29 percent
4. Critical → Greater than 30 percent

Notably, these EU exposure metrics are only as reliable as the underlying trade reporting. For exporters with significant trade to regions where partner countries report inconsistently to UN Comtrade, data gaps can inflate apparent EU dependency. Where able, the assessment highlights markets where this inflation might impact exposure tiers.

Additionally, the exposure tiers presented in this assessment are for the broad category levels (see 'Commodity Categories'). This can obscure the exposure of constituent specific categories (e.g., a broad commodity category can read as 'Moderate' while a specific category within it can be 'Critical'). It is advised that interested parties review the specific category data for more context on any given broad commodity category.

Value at Risk

The value-at-risk metric measures the magnitude of trade value at risk if the proposed EU policy is implemented. It is calculated as follows:

[6] World import data is sourced from UN Comtrade to ensure data source congruency with EU imports.

1. **Start with the top 20 export categories.** For each country, the MRL assessment looks at the 20 largest exported commodity categories to the EU (each with a known USD value).
2. **Match commodity categories to MRLs.** Each of these commodities is linked to a relevant MRL commodity or commodities through the process described above.
3. **Test for potential risk.** The MRL analysis previously outlined then determines which of these MRLs would put the commodity at risk if the policy takes effect. Commodities whose MRLs are *not* at risk and those categories we cannot match to a specific commodity (see 'Limitations of Trade Data) are removed from the calculation.
4. **Sum the trade value of the commodities expected to be at risk.** Value-at-Risk is the total USD value of only the exports that remain (i.e., those likely to be exposed to the policy change).

A Value at Risk was calculated for markets that accept Codex. However, this value should be considered with **caution**. While Codex MRLs were used as a proxy for registration, it cannot be assumed that all countries that defer to Codex MRLs have a corresponding registration for that crop-pesticide combination.

Because it filters out commodities that the MRL analysis clears, 'Value at Risk' is always a subset of the broader 'Trade Value Exposed' metric (which includes all top 20 exports tied to any MRL, regardless of expected risk).

CODEX

The Codex Alimentarius is a collection of internationally recognized standards, including pesticide maximum residue levels (MRLs), published by the Food and Agriculture Organization (FAO) and World Health Organization (WHO) of the United Nations. Codex standards play a crucial role in harmonizing MRLs and facilitating international trade.

Over the past decades, many countries have developed or revised their food laws, including food standards, leading to the creation of their own domestic national MRL lists. The use of Codex MRLs varies among these countries: some defer to Codex MRLs fully, while others incorporate them into their national lists to varying degrees. Even nations with independent systems often review and consider Codex MRLs when establishing their own standards.

In the Americas, **18 countries** fully defer to Codex MRLs, while **6** partially defer. Countries with full deferrals do not establish their own national MRL lists and accept Codex MRLs for trade purposes. Countries with partial deferrals maintain a national list and defer to Codex MRLs in the absence of domestic MRLs or for international trade purposes.

For countries without established domestic MRLs, Codex MRLs were used as guidance for the MRL analysis. Of the **63** substances in the review scope, **45** have at least one established Codex MRL. While the analysis likely does not reflect the actual availability or the use of certain active substances in the region, it illustrates the potential impact on top commodity exports.

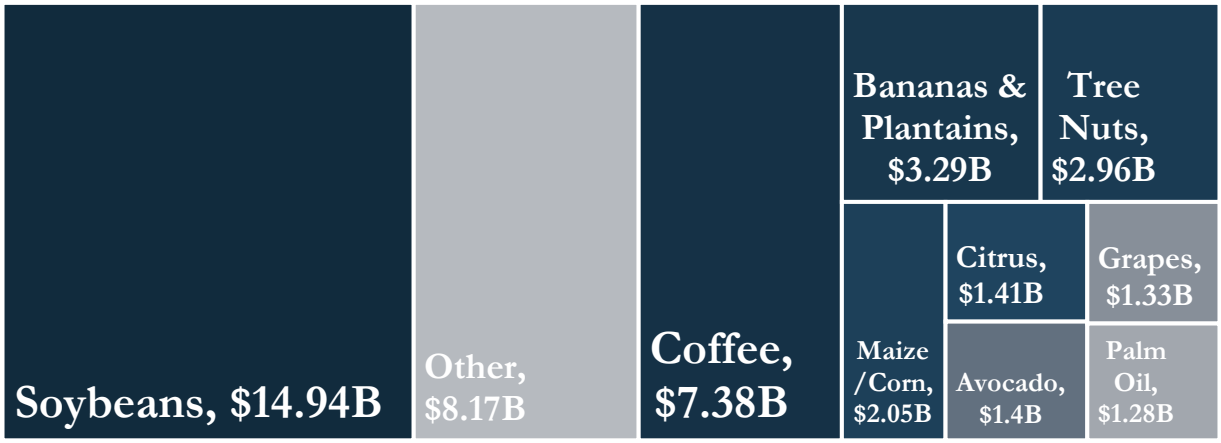
Although Paraguay maintains a national list, Codex MRLs were also considered in its MRL analysis, as further explained in the Paraguay country section.

AMERICAS

Trade Value Exposed
$44.2B
2022-2024 avg, USD

Dependency Tier
Moderate
13.3% of exports by value are EU-bound

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 10 other commodities detailed below.

Trade Narrative

The Americas relationship with the European Union (EU) writ large is defined by Soybeans and Coffee, which together make up roughly half of the Americas' top 20 commodity categories bound for the EU. According to EU HS-8 data, the Coffee category almost entirely (97%, $7.1B) comprised of green coffee. The Tree Nuts category, primarily attributable to the United States, is also worth highlighting for its diverse composition, split between almonds (37%, $1.09B), pistachios (27%, $822M), walnuts (19%, $572M), pecans (5%, $149M), and various other tree nuts. In a similar vein, the Citrus category is split between oranges/orange juice (67%, $948M), fresh/dried limes (14%, $205M), fresh/dried lemons (7%, $96M), and a collection of other citruses.

In looking at dependency tiers, Palm Oil and Groundnuts/Peanuts, both in the lower half of the top 10 commodity categories bound for the EU, fall into the 'critical' dependency tier, with 51% and 30% of each category's exports, respectively. Similarly, Pineapple is notable for meriting a 'critical' label, as 31% of all pineapple exports from the Americas are destined for the EU. These categories with a higher dependency rating are likely more vulnerable to disruption from changing EU MRL policy, as it is more difficult to compensate for lost market access.

Detailed Top 20 Broad Agricultural Categories

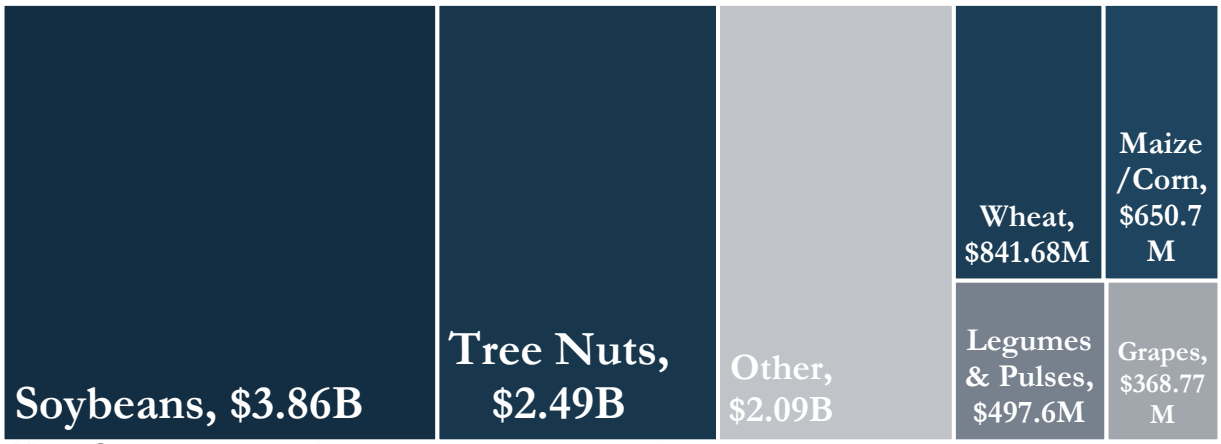
#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$14.94B	Moderate
2	Coffee	$7.38B	Critical
3	Bananas & Plantains	$3.29B	Critical
4	Tree Nuts	$2.96B	High
5	Maize/Corn	$2.05B	Moderate
6	Citrus	$1.41B	High
7	Avocado	$1.4B	High
8	Grapes	$1.33B	Moderate
9	Palm Oil	$1.28B	Critical
10	Groundnuts/Peanuts	$1.05B	Critical
11	Cocoa	$933.38M	High
12	Mixed/Other Vegetables	$850.51M	Moderate
13	Wheat	$841.96M	Low
14	Berries	$833.56M	Moderate
15	Pineapple	$808.5M	Critical
16	Mixed Fruit & Nuts	$701.75M	Moderate
17	Legumes & Pulses	$697.56M	Moderate
18	Cane/Beet Sugar	$579.72M	Low
19	Mango, Guava & Mangosteen	$504.6M	High
20	Sunflower Seed	$374.87M	Critical

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

NORTH AMERICA

Trade Value Exposed	Dependency Tier
$10.8B	**Moderate**
2022-2024 avg, USD	6.7% of exports by value are EU-bound

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

North America's top 20 trade categories bound for the European Union (EU) are heavily biased by the United States, which is the largest exporter in the region. As result, the top categories of Soybeans and Tree Nuts are pulled to the top two spots in the region, accounting for nearly 59% of the top 20 commodity categories bound for the EU. The EU's HS-8 import data reveals that the Tree Nuts category is comprised of 43% almonds ($1.09B), 32% pistachios ($821M), 15% walnuts ($383M), 5.9% pecans ($147M), and a relatively marginal mixture of other tree nuts.

Tree Nuts is also notable for being the only commodity category to merit a 'high' dependency on the EU. Approximately 18% of all Tree Nut exports from North America are bound for EU. Potential disruption of this trade flow due to changes in MRL policy in the EU could pose a threat to the region and its economy at large.

Detailed Top 20 Broad Agricultural Categories

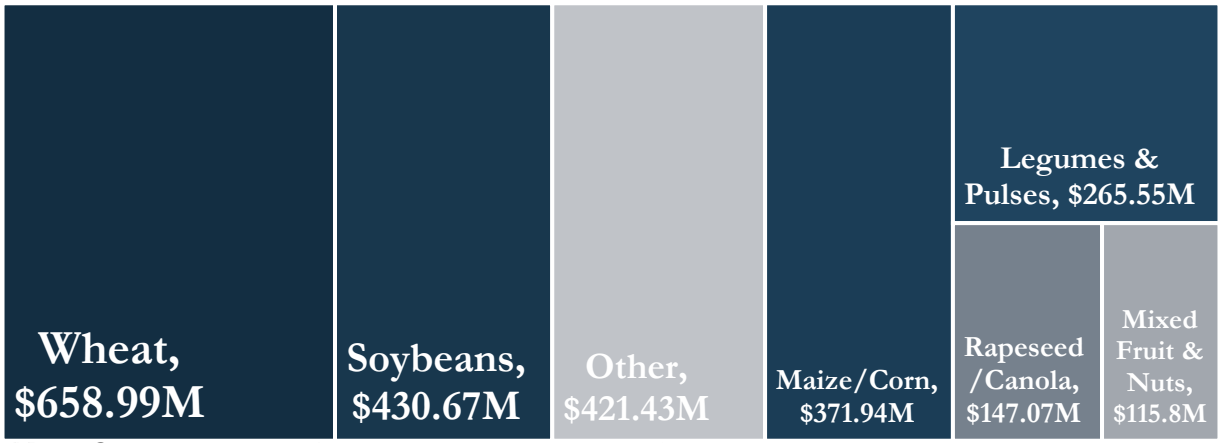
#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$3.86B	Moderate
2	Tree Nuts	$2.49B	High
3	Wheat	$841.68M	Low
4	Maize/Corn	$650.7M	Low
5	Legumes & Pulses	$497.6M	Moderate
6	Grapes	$368.77M	Moderate
7	Other Cereals	$244.08M	Low
8	Mixed Fruit & Nuts	$204.39M	Moderate
9	Berries	$197.12M	Low
10	Other Sugars	$178.62M	Moderate
11	Coffee	$177.94M	Low
12	Mixed/Other Vegetables	$177.14M	Low
13	Groundnuts/Peanuts	$158.93M	Moderate
14	Rapeseed/Canola	$148.2M	Low
15	Barley	$143.87M	Low
16	Cocoa	$102.88M	Moderate
17	Citrus	$101.12M	Low
18	Other Vegetable Extracts	$99.85M	High
19	Hops	$81.06M	Moderate
20	Tropical Roots & Tubers	$79.45M	High

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

Canada

Trade Value Exposed	Dependency Tier	Value at Risk
$2.4B	**Moderate**	**$2B**
2022-2024 avg, USD	6.6% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

Most of Canada's top commodity category exports to the European Union (EU) are composed of uncomplicated single commodities (e.g., Wheat, Soybeans, Maize/Corn, etc.). That said, it is worth looking at the HS-8 data to better understand the composition of the Legumes & Pulses category. It is largely made up of lentils (54%, $145M) but also includes a wide array of dried beans (28%, $76M, mostly kidney beans), and dried peas (4%, $10M). The Mixed Fruits & Nuts category is, meanwhile, more difficult to parse given the nature of trade data grouping. However, it is notable that approximately 61% ($71M) of the category can be attributed to frozen lowbush blueberries based on EU HS-8 data.

In terms of dependency on the EU, the Maize/Corn is the largest category falling into the 'critical' bucket. Approximately 34% of Canadian Maize/Corn exports are bound for the EU, making it a key market for this industry and the market. Notably, the Cocoa category also merits a 'critical' label with 36% of all of Canada's exports going to the EU market. Unlike other markets in South and Central America, however, this Cocoa category is entirely (>99%, $59M) cocoa powder and butter products.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Wheat	$658.99M	Moderate
2	Soybeans	$430.67M	High
3	Maize/Corn	$371.94M	Critical
4	Legumes & Pulses	$265.55M	Moderate
5	Rapeseed/Canola	$147.07M	Low
6	Mixed Fruit & Nuts	$115.8M	Moderate
7	Other Sugars	$98.74M	Moderate
8	Berries	$89.2M	High
9	Cocoa	$59.57M	Critical
10	Mustard Seed	$47.65M	High

#	Commodity Category	EU Trade Value	EU Dependency
11	Other Cereals	$46.3M	Moderate
12	Alfalfa & Forage	$28.07M	Moderate
13	Linseed/Flaxseed	$17.11M	Moderate
14	Other Vegetable Extracts	$13.48M	High
15	Coffee	$6.19M	Low
16	Other Oilseeds	$5.34M	Moderate
17	Seaweed & Algae	$3.37M	Moderate
18	Mushrooms & Truffles	$2.16M	Low
19	Barley	$2.14M	Low
20	Mixed/Other Vegetables	$2.13M	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Canada maintains an independent national list of MRLs and does not defer to other market standards. In cases where no specific MRL has been established, a default of 0.1 ppm is applied.

Of the 63 active substances on the EU list, 46 have at least one established Canadian MRL. Based on the trade data analysis, this assessment reviewed these 46 substances across more than 85 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were over 60 commodities with at least one established Canadian and EU MRLs. Of these, **nearly 30 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Canadian producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Canadian MRLs established for **wheat, 8% are at risk** of elimination if the policy is implemented. Similarly, Canadian **lentils**, **field peas**, and **canola (rapeseed)** each face a potential **risk of losing 11%** of their established EU MRLs.

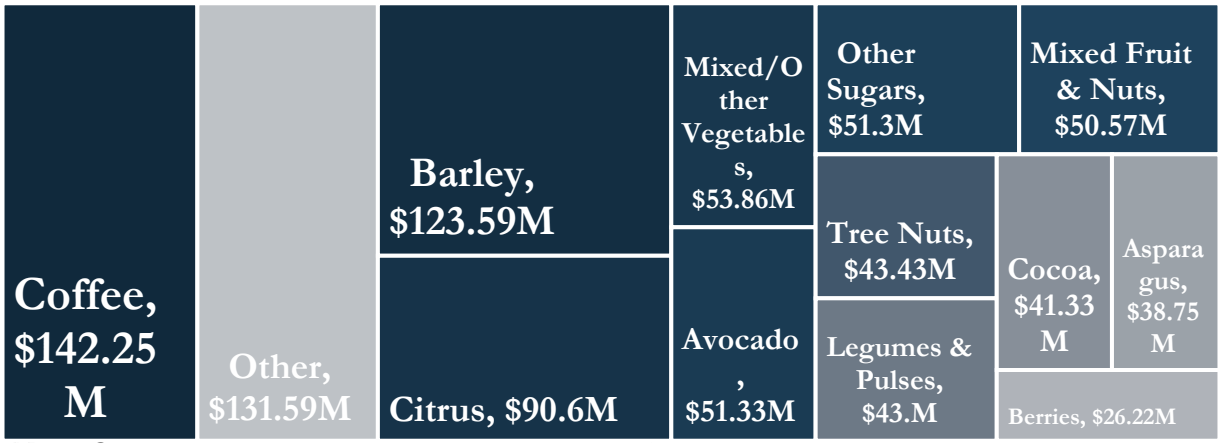
Multiple substances impact **over 20 commodities each**. In particular, the fungicide difenoconazole has the largest impact, affecting 42 commodities, followed by fludioxonil (38 commodities), and cyprodinil (32 commodities).

Active Substances	Commodities Impacted (#)
Difenoconazole	42
Fludioxonil	38
Cyprodinil	32
Flubendiamide	28
Glufosinate	28
Sulfoxaflor	27
Bifenthrin	22
Metconazole	22
Prothioconazole	21
Diquat	20
Myclobutanil	18
Tebuconazole	18
Imidacloprid	17
Spirodiclofen	16
Malathion	9
Quinoxyfen	9
Mancozeb	8
Maneb	8
Metiram	8
Tetraconazole	8
Dimethomorph	7
Fenazaquin	7
Carbaryl	6
Pendimethalin	6
Fenbuconazole	4
Isopyrazam	4
Benthiavalicarb	3
Acibenzolar-S-methyl (benzothiadiazole)	2
Clofentezine	2
Famoxadone	2
Proquinazid	2
Chlorpropham	1
Flufenacet (formerly fluthiamide)	1

Mexico

Trade Value Exposed	Dependency Tier	Value at Risk
$887M	**Low**	**$718M**
2022-2024 avg, USD	3.3% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 8 other commodities detailed below.

Trade Narrative

Mexico is relatively unique for not having a dominant set of export categories bound for the European Union (EU). Moreover, almost all of Mexico's top 20 export categories fall into either the 'low' or 'moderate' dependency tiers. That said, it is worth unpacking a couple of the more ambiguous categories to understand their composition. For example, the Citrus category, the fourth largest, is split between orange juice (63%, $57M), fresh/dried limes (17%, $15.3M), grapefruit juice (9%, $8M), and several relatively minor other types of citruses. The Tree Nuts category is similarly notable for being comprised entirely of pecans ($43M).

The Cocoa category is worth highlighting for being the only category to fall into the 'critical' dependency category. Unlike many of its southern neighbors, however, Mexico primarily exports cocoa butter ($36M) to the EU. Moreover, based on the MRL analysis that follows, it is unlikely that cocoa exports from Mexico are at risk to changing EU policy.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Coffee	$142.25M	Moderate
2	Barley	$123.59M	Low
3	Citrus	$90.6M	Low
4	Mixed/Other Vegetables	$53.86M	Low
5	Avocado	$51.33M	Low
6	Other Sugars	$51.3M	High
7	Mixed Fruit & Nuts	$50.57M	Low
8	Tree Nuts	$43.43M	Moderate
9	Legumes & Pulses	$43.M	Moderate
10	Cocoa	$41.33M	Critical
11	Asparagus	$38.75M	Moderate
12	Berries	$26.22M	Low
13	Mango, Guava & Mangosteen	$22.71M	Low
14	Sesame Seed	$22.58M	High
15	Other Vegetable Extracts	$18.99M	High
16	Capsicum/Chili (Spice)	$18.69M	Moderate
17	Fruit & Vegetable Derivatives	$18.32M	High
18	Other Oilseeds	$14.96M	Low
19	Alliums	$8.01M	Low
20	Maize/Corn	$7.33M	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Mexico maintains an independent national MRL list and does not defer to other market standards.

Of the 63 active substances on the EU list, **39** have at least one established Mexican MRL. Based on the trade data analysis, this assessment reviewed these 39 substances across more than 85 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were over 55 commodities with at least one established Mexican and EU MRLs. Of these, **36 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Mexican producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Mexican MRLs established for various citrus, such as **mandarins (tangerines), limes**, **sweet oranges**, **lemon**, and **grapefruit** have **15%, 15%, 14% 14%,** and **13% of MRLs at risk of being eliminated** if the policy is implemented. Mexican **melon MRLs** face **13%** at risk and **pecans 8%** of potentially losing established EU MRLs. As noted in the trade section above, cocoa is unlikely to be affected, since neither the EU nor Mexico have established MRLs for cocoa from the reviewed list of active substances.

Several substances impact **over 20 plus commodities each**. The herbicide glufosinate has the largest impact affecting 35 commodities, and the fungicides difenoconazole, tebuconazole and fludioxonil impact 33, 30, and 29 commodities, respectively.

Active Substance	Commodities Impacted (#)
Glufosinate	35
Difenoconazole	33
Tebuconazole	30
Fludioxonil	29
Bifenthrin	24
Alpha-Cypermethrin	23
Imidacloprid	19
Mancozeb	19
Sulfoxaflor	19
Maneb	16
Myclobutanil	16
Spirodiclofen	16
Dimethomorph	15
Flubendiamide	15
Cyprodinil	14
Diquat	13
Fenazaquin	12
Quinoxyfen	9
Beta-Cyfluthrin	8
Cyfluthrin	8
Lufenuron	8
Metiram	8
Acibenzolar-S-methyl	7
Malathion	7
Tetraconazole	7
Isopyrazam	6
Fenbuconazole	5
Metconazole	4
Clofentezine	3
Esfenvalerate	3
Famoxadone	3
Fenoxaprop-P	2
Pendimethalin	2
Benalaxyl	1
Beta-Cypermethrin	1
Carbaryl	1
Cyproconazole	1
Dicloran	1
Propargite	1

United States

Trade Value Exposed	Dependency Tier	Value at Risk
$8B	**Moderate**	**$7.68B**
2022-2024 avg, USD	7.7% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 15 other commodities detailed below.

Trade Narrative

The Soybean and Tree Nut categories account for approximately 73% of value bound for the European Union. The EU's HS-8 data reveals that the Tree Nuts category is compositionally diverse with key constituents including almonds (44%, $1.09B), pistachios (33%, $821M), and walnuts (15%, $383M). The remaining ~8% is composed of various tree nuts such as hazelnuts/filberts, macadamia nuts, and pecans, but no single commodity dominates in this grouping.

In terms of dependency on the EU, the United States benefits from having one of the most diverse groups of export partners. As a result, no single commodity category falls into the 'critical' dependency bucket for the dataset used in this analysis. That said, it is worth looking at the composition of the Grapes category, as it is largely dominated by wine (92%, $338M) while the remainder is mostly raisins (6%, $24M).

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$3.43B	Moderate
2	Tree Nuts	$2.45B	High
3	Grapes	$366.25M	Moderate
4	Maize/Corn	$271.43M	Low
5	Other Cereals	$197.78M	Low
6	Legumes & Pulses	$189.06M	Moderate
7	Wheat	$182.68M	Low
8	Groundnuts/Peanuts	$157.37M	Moderate
9	Mixed/Other Vegetables	$121.16M	Moderate
10	Berries	$81.7M	Low
11	Hops	$81.02M	Moderate
12	Tropical Roots & Tubers	$77.23M	High
13	Sunflower Seed	$74.41M	High
14	Other Vegetable Extracts	$67.38M	High
15	Tomatoes	$61.14M	Moderate
16	Cane/Beet Sugar	$52.22M	Moderate
17	Other Oilseeds	$43.47M	Moderate
18	Alfalfa & Forage	$39.24M	Low
19	Mixed Fruit & Nuts	$38.02M	Low
20	Stone Fruit	$36.23M	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

The United States maintains an independent national MRL list and does not defer to other market standards.

Of the 63 active substances on the EU list, **55** have at least one established U.S. MRL. Based on the trade data analysis, this assessment reviewed these 55 substances across more than 105 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were over 80 commodities with at least one established U.S. and EU MRLs. Of these, **nearly 30 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that U.S. producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the U.S. MRLs established for **cranberry, 60% are at risk** of elimination if the policy is implemented. U.S. **wine grapes** and **hops** face **12% of MRLs at risk** while **wheat** and **barley 11%** each. Additionally, **sweet cherry faces 10%** and **soybeans 8%** at risk of potentially losing their established EU MRLs.

Multiple substances impact **over 20 plus commodities each**. The fungicide difenoconazole has the largest impact, affecting 46 commodities, followed by cyprodinil and tebuconazole (44 commodities each), and fludioxonil (42 commodities), the insecticide bifenthrin (45 commodities) and the herbicide glufosinate (43 commodities).

Active Substance	Commodities Impacted (#)
Difenoconazole	46
Bifenthrin	45
Cyprodinil	44
Tebuconazole	44
Glufosinate	43

Active Substance	Commodities Impacted (#)
Fludioxonil	42
Flubendiamide	35
Sulfoxaflor	35
Diquat	26
Spirodiclofen	23
Mancozeb	21
Fenazaquin	20
Imidacloprid	20
Metconazole	20
Alpha-Cypermethrin	19
Myclobutanil	19
Prothioconazole	16
Esfenvalerate	15
Dimethomorph	13
Beta-Cyfluthrin	11
Cyfluthrin	11
Pendimethalin	11
Quinoxyfen	11
Cyproconazole	10
Carbaryl	9
Malathion	8
Tetraconazole	8
Acibenzolar-S-methyl	7
Fenbuconazole	7
Fenoxaprop-P	6
Famoxadone	5
Clofentezine	4
Metiram	3
Oxyfluorfen	3
Benfluralin	2
Chlorpropham	2
Dicloran	2
Flufenacet	2
Propargite	2
Acetochlor	1
Benalaxyl	1
Benthiavalicarb	1
Dinocap	1
Halosulfuron-methyl	1
Indoxacarb	1

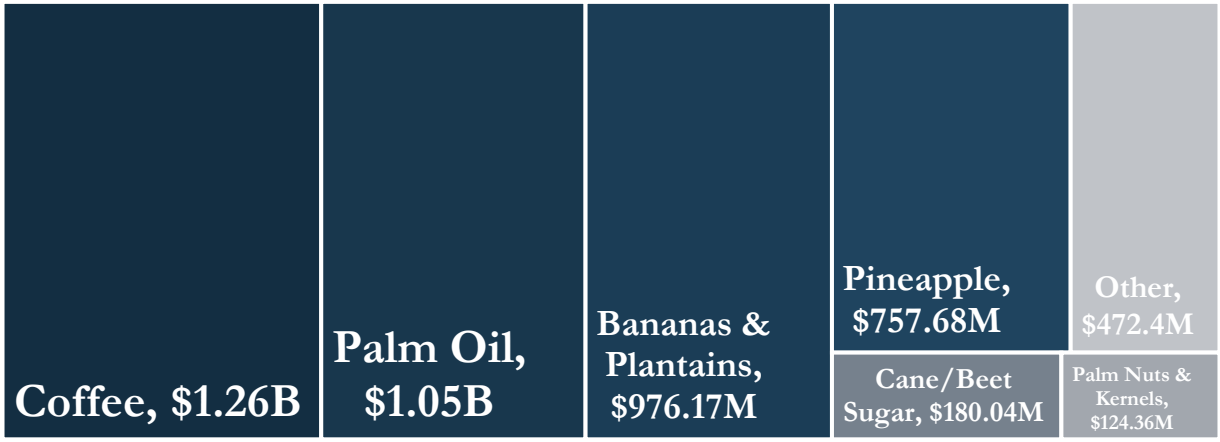
Active Substance	Commodities Impacted (#)
Ipconazole	1
Iprodione	1
Isopyrazam	1
Linuron	1
Maneb	1
Mepanipyrim	1
Metribuzin	1
Permethrin	1
Picoxystrobin	1
Proquinazid	1

CENTRAL AMERICA

Trade Value Exposed
$4.81B
2022-2024 avg, USD

Dependency Tier
High
28.1% of exports by value are EU-bound

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

As a region, Central America's top 20 trade flow categories are led by Coffee, Palm Oil, Bananas/Plantains, and Pineapple, which together account for roughly 82% of the top 20 categories by value. The European Union's (EU) HS-8 import data provides a clearer picture of these broader categories: Coffee is almost entirely green coffee (99%), Bananas/Plantains is 99% fresh bananas, and Pineapple splits between fresh pineapples (83%), pineapple juice (16%), and a small remainder (<1%) of prepared/dried pineapples.

Palm Oil and Palm Nuts/Kernels carry 'Critical' trade dependency on the EU, with more than 60% of both categories' exports bound for the EU. Coffee and Bananas are also 'Critical', though less acutely so, sending only 30-35% of their respective exports to the EU. Avocados, though smaller in absolute dollar terms than the top categories, merits note, as 43% of said category's exports from Central America are EU bound.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Coffee	$1.26B	Critical
2	Palm Oil	$1.05B	Critical
3	Bananas & Plantains	$976.17M	High
4	Pineapple	$757.68M	Critical
5	Cane/Beet Sugar	$180.04M	Moderate
6	Palm Nuts & Kernels	$124.36M	Critical
7	Mixed Fruit & Nuts	$118.96M	High
8	Melons & Watermelon	$105.13M	Moderate
9	Groundnuts/Peanuts	$58.8M	Critical
10	Tropical Roots & Tubers	$58.34M	High
11	Mixed/Other Vegetables	$44.78M	Moderate
12	Cardamom	$20.88M	Moderate
13	Cocoa	$13.29M	Critical
14	Sesame Seed	$10.64M	High
15	Avocado	$10.63M	Critical
16	Legumes & Pulses	$9.39M	Low
17	Citrus	$8.33M	Moderate
18	Other Oilseeds	$5.47M	High
19	Tree Nuts	$5.M	Moderate
20	Capsicum/Chili (Spice)	$2.75M	High

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

Belize

Trade Value Exposed	Dependency Tier	Value at Risk
$59.9M	**Critical**	**$59.1M**
2022-2024 avg, USD	31.8% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 18 other commodities detailed below and is equivalent to ~$950k.

Trade Narrative

Cane/Beet Sugar and Bananas/Plantains dominate Belize's agricultural exports to the European Union (EU). At the HS-8 level, this concentration narrows specifically to raw cane sugar ($41M) and bananas($17.4M). Every other top 20 broad agricultural category exported to the EU and considered within the scope of analysis is marginal by comparison.

In terms of exposure to the EU, raw sugar cane is notable for its 'critical' exposure level, with 51% of Belize's sugar cane exports bound for the EU. Bananas, meanwhile, merit a 'high' exposure level, with 29% EU-bound on average. Cocoa, though far smaller in absolute terms ($347K), is worth highlighting on its own: 42% of Belize's cocoa exports go to the EU. Given Belize's recent efforts (March 2026) to expand its cocoa industry by way of the newly convened National Cacao Committee, this exposure shouldn't be discounted on account of the industry's smaller size.

Taken together raw sugar cane, bananas, and cocoa, represent Belize's primary points of exposure to changing EU MRL policy now and in the future. Based on its overall 'critical' exposure, it would be expected most of its trade value exposed would be at risk. Since Belize defers to Codex, the top 99% of commodity exports were considered to calculate a value-at-risk. Cocoa was excluded from this calculation as there are no corresponding EU and Codex MRLs for the substances under review.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Cane/Beet Sugar	$41.54M	Critical
2	Bananas & Plantains	$17.44M	High
3	Citrus	$390,728	Low
4	Cocoa	$347,582	Critical
5	Legumes & Pulses	$122,501	Low
6	Mixed/Other Vegetables	$80,836	Moderate
7	Coffee	$7,452	Low
8	Alfalfa & Forage	$747	Moderate
9	Barley	$328	Low
10	Copra/Coconut	$55	Low
11	Grapes	$22	Low
12	Pepper (Piper)	$18	Low
13	Solanaceous Vegetables	$14	Low
14	Mixed Fruit & Nuts	$5	Low
15	Pineapple	$1	Low
16	Other Oilseeds	$1	Low
17	---	---	---
18	---	---	---
19	---	---	---
20	---	---	---

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Belize does not maintain a national MRL list and defers to Codex. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 99% of Belize's commodity exports to the EU. Of the active substances and commodities reviewed, **10** have corresponding Codex and EU MRLs for **banana**, **2** for **sugar cane**, **21** for **sweet oranges**, **16** for **kidney beans**, **11** for **beet sugar** and none for **cocoa bean.** Because Belize relies entirely on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for banana and sugar cane.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

Active substances with sugar cane Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide

Costa Rica

Trade Value Exposed	Dependency Tier	Value at Risk
$1.90B	**Critical**	**$1.63B**
2022-2024 avg, USD	35.6% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 15 other commodities detailed below.

Trade Narrative

Pineapple and Bananas/Plantains make up roughly 75% of Costa Rica's top categories by value exported to the European Union (EU). The EU's HS-8 data suggests that the Pineapple category is roughly 16% pineapple juice, 83% fresh/dried pineapple, and a marginal percentage of prepared/preserved pineapple. The Bananas/Plantains category, meanwhile, is almost entirely (99%) fresh bananas. Relative to these two top categories, the balance of Costa Rica's exports to the EU is minor in absolute dollar terms.

In terms of reliance on the EU as a consistent export market, the Pineapple and Bananas/Plantains categories are of particular note for falling into the 'critical' bucket, with 38% and 40% of total exports respectively going to the EU. The Palm Oil and Melons & Watermelons categories run in a similar vein with 64% and 46% respectively. The EU's HS-8 data reveals that the Melons & Watermelons category is split, roughly, 50/50 into watermelons and other melons, such as cantaloupe and honeydew.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Pineapple	$744.66M	Critical
2	Bananas & Plantains	$684.9M	Critical
3	Palm Oil	$144.83M	Critical
4	Mixed Fruit & Nuts	$94.69M	High
5	Coffee	$71.35M	High
6	Melons & Watermelon	$58.67M	Critical
7	Tropical Roots & Tubers	$52.78M	High
8	Palm Nuts & Kernels	$19.68M	Critical
9	Cane/Beet Sugar	$14.74M	Moderate
10	Mixed/Other Vegetables	$5.76M	Moderate

#	Commodity Category	EU Trade Value	EU Dependency
11	Citrus	$4.55M	Moderate
12	Mango, Guava & Mangosteen	$1.82M	High
13	Root Vegetables	$1.19M	Moderate
14	Ginger	$1.14M	High
15	Cocoa	$813,800	Critical
16	Coconut	$628,999	Moderate
17	Cucurbits	$505,344	Low
18	Palm Hearts	$367,034	Moderate
19	Tomatoes	$297,941	Low
20	Turmeric	$264,259	Critical

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Costa Rica maintains a national MRL list, deferring to Codex in the absence of an established national MRL. When there is no established national or Codex MRL, U.S. and EU MRLs are compared and the highest (least restrictive) MRL is applied.

Of the 63 active substances on the EU list, **37** have at least one established Costa Rican MRL. Based on the trade data analysis, this assessment reviewed these 37 substances across more than 58 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were 38 commodities with at least one established Costa Rican and EU MRLs. Of these, **19 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Costa Rican producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Costa Rican MRLs established for **melons 12%** and **watermelon 11%** are at risk of being eliminated if the policy is implemented. Similarly, **9%** of **bananas**, **3%** of **coffee** and **2%** of **pineapple** MRLs each face a potential risk of losing their established EU MRLs.

There were several substances that impact **over 20 plus commodities each**. Fungicides difenoconazole has the largest impact, affecting 33 commodities, followed by fludioxonil (27 commodities), tebuconazole (26 commodities), myclobutanil (24 commodities), and insecticides alpha-cypermethrin and beta-cypermethrin each impacting 23 commodities.

Active Substance	Commodities Impacted (#)
Difenoconazole	33
Fludioxonil	27
Tebuconazole	26
Myclobutanil	24
Alpha-Cypermethrin	23
Beta-Cypermethrin	23
Sulfoxaflor	19
Mancozeb	16
Maneb	16
Metiram	16
Bifenthrin	15
Spirodiclofen	15
Dimethomorph	14
Imidacloprid	14
Cyprodinil	12
Clofentezine	10
Fenazaquin	8
Lufenuron	8
Cyfluthrin	7
Benalaxyl	6
Cyproconazole	6
Diquat	6
Tetraconazole	6
Quinoxyfen	5
Malathion	4
Acibenzolar-S-methyl	3
Famoxadone	3
Mepanipyrim	3
Carbaryl	2
Fenbuconazole	2
Fenoxaprop-P	2
Glufosinate	2
Metconazole	2
Pendimethalin	2
Dicloran	1
Propargite	1
Prothioconazole	1

El Salvador

Trade Value Exposed	Dependency Tier	Value at Risk
$71.3M	**Moderate**	**$70.5M**
2022-2024 avg, USD	11.2% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 18 other commodities detailed below and is equivalent to ~$887K.

Trade Narrative

Coffee and Cane/Beet Sugar account for the bulk of El Salvador's agricultural exports to the European Union (EU), 66.7% and 33.1% of the top 20 exported categories, respectively. The remaining 18 categories within the scope of the analysis are minor by comparison. At the HS-8 level, the coffee category is largely green coffee, while the cane/beet sugar category is entirely raw cane sugar.

Of these two commodities, coffee carries 'high' exposure to the EU, with 27% of exports EU-bound. Raw cane sugar is far less exposed, given that only 6.6% of El Salvador's raw cane sugar exports are EU-bound. Overall, El Salvador is less exposed to the EU market than many of its regional neighbors. However, its reliance on the EU as a consistent destination market for green coffee is notable, and worth watching closely given the potential impact of changing EU MRLs.

Since El Salvador accepts Codex MRLs, the top 99% of commodity exports were considered to calculate a value-at-risk. Cocoa was excluded from this calculation as there are no corresponding EU and Codex MRLs for the substances under review, therefore assumed risk for cocoa exports to the EU would be expected to have no impact from the proposed policy changes.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Coffee	$46.86M	High
2	Cane/Beet Sugar	$23.59M	Moderate
3	Mixed Fruit & Nuts	$396,250	Low
4	Legumes & Pulses	$243,737	Low
5	Cocoa	$163,349	Critical
6	Tree Nuts	$41,884	Moderate
7	Mixed/Other Vegetables	$10,744	Low
8	Olives	$10,095	Moderate
9	Other Cereals	$7,263	Low
10	Maize/Corn	$6,878	Low
11	Barley	$3,420	Low
12	Other Tropical/Exotic Fruit	$2,011	Low
13	Other Vegetable Extracts	$759	Low
14	Other Sugars	$252	Low
15	Tea	$111	Low
16	Other Spices	$94	Low
17	Citrus	$86	Low
18	Maté	$82	Critical
19	Mango, Guava & Mangosteen	$62	Low
20	Pineapple	$47	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

El Salvador defers to Codex. When there is no established Codex MRL, U.S. and EU MRLs are compared, and the least restrictive (higher value) MRL is accepted. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 99% of El Salvador's commodity exports to the EU. Of the active substances and commodities reviewed, **11** have corresponding Codex and EU MRLs for **sugar beet, roots, 5** for **green coffee, 2** for **sugar cane,** and **none** for **cocoa bean.** Because El Salvador relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for sugar beet, green coffee bean, and sugar cane.

Active substances with sugar beet, root Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide
Cyproconazole	Fungicide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Mancozeb	Fungicide
Maneb	Fungicide
Metconazole	Fungicide
Metiram	Fungicide
Prothioconazole	Fungicide

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

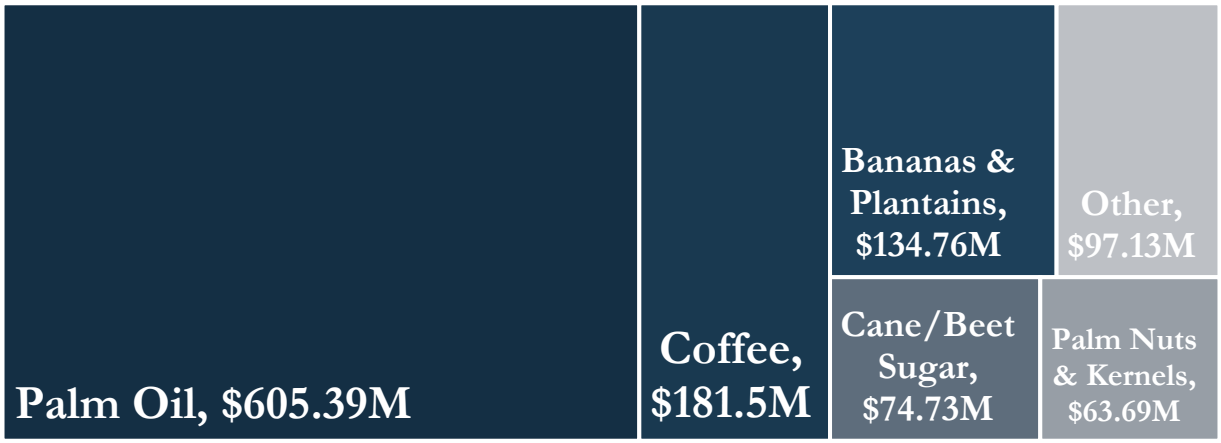
Active substances with sugar cane Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide

Guatemala

Trade Value Exposed	Dependency Tier	Value at Risk
$1.16B	**High**	**$382.5M**
2022-2024 avg, USD	18.4% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 15 other commodities detailed below.

Trade Narrative

Taken together, Palm Oil and Raw Palm Nuts/Kernels account for the majority (57.8%) of Guatemala's top 20 commodities exported to the European Union (EU). Coffee, bananas/plantains, and cane/beet sugar collectively account for another 33.8%, while the remaining 8.4% is made up of relatively marginal categories. At the HS-8 level, the coffee category is primarily green coffee ($181.3M), and while cane/beet sugar is primarily cane sugar, only about 18% of that is raw cane sugar.

In terms of exposure, Palm Oil and Raw Palm Nuts/Kernels once more lead with a 'critical' level, with ~70% of exports bound for the EU. Coffee exports, in contrast, while considered a 'high' exposure, only 15.8% are EU-bound. Avocados, while accounting for considerably less absolute value, are worth highlighting, as they fall into the "critical" bucket, with 54.8% of exports destined for the EU. Disruption of any one of these commodities due to MRL policy changes would have a dramatic effect on the value Guatemala might derive from exporting to the EU.

Since Guatemala accepts Codex MRLs, the top 98% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for Palm oil and palm fruit, they were excluded from this calculation because the Codex proxy method cannot assess them with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Palm Oil	$605.39M	Critical
2	Coffee	$181.5M	High
3	Bananas & Plantains	$134.76M	Moderate
4	Cane/Beet Sugar	$74.73M	Moderate
5	Palm Nuts & Kernels	$63.69M	Critical
6	Cardamom	$20.45M	Moderate
7	Mixed Fruit & Nuts	$18.73M	Moderate
8	Mixed/Other Vegetables	$17.55M	Moderate
9	Avocado	$10.5M	Critical
10	Sesame Seed	$10.25M	High
11	Legumes & Pulses	$7.82M	Low
12	Tree Nuts	$4.31M	Moderate
13	Berries	$1.44M	Low
14	Pineapple	$1.28M	Low
15	Cocoa	$1.22M	Critical
16	Citrus	$1.18M	Moderate
17	Capsicum/Chili (Spice)	$1.01M	Moderate
18	Melons & Watermelon	$549,239	Low
19	Other Oilseeds	$492,353	High
20	Other Tropical/Exotic Fruit	$350,982	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Guatemala does not maintain a national MRL list, and defers to Codex, U.S. and EU standards. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 98% of Guatemala's commodity exports to the EU. Of the active substances and commodities reviewed, **10** have corresponding Codex and EU MRLs for **banana, 5** for **green coffee beans**, **11** for **sugar beet**, **5** for **avocado**, **2** for **sugar cane**, and **none** for either **palm fruit** or **palm nuts.** Because Guatemala relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for banana and green coffee bean.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Honduras

Trade Value Exposed	Dependency Tier	Value at Risk
$1.19B	**Critical**	**$797.6M**
2022-2024 avg, USD	39.0% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 16 other commodities detailed below.

Trade Narrative

Coffee and Palm Oil dominate Honduras' exports to the European Union (EU), accounting for nearly 90% of the value of Honduras' top 20 commodity categories exported to the EU. The EU's more detailed HS-8 import data reveals that the Coffee category consists entirely of green coffee, while Palm Oil is roughly 90% food-grade oil. The remaining top 20 categories are nominal by comparison.

Considering their dependency on the EU, Honduras' top three commodity categories, Coffee, Palm Oil, and Palm Nuts/Kernels, all fall into the "critical" dependency tier. Respectively, 52%, 62%, and 69% of their exports are EU-bound. This concentration means Honduras has little room to absorb changes in EU MRL policy across its three largest export categories at once. A restriction affecting any one of them risks meaningful value loss for growers and the broader economy.

Taken together coffee and palm oil represent Honduras' primary exposure to changing EU MRL policy now and in the future. Based on its overall 'critical' exposure, it would be expected most of its trade value exposed would be at risk. Since Honduras' accepts Codex, the top 99% of commodity exports were considered to calculate value-at-risk. As there are no corresponding EU and Codex MRLs for Palm oil and palm fruit, they were excluded from this calculation because the Codex proxy method cannot assess them with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Coffee	$781.68M	Critical
2	Palm Oil	$280.78M	Critical
3	Palm Nuts & Kernels	$40.7M	Critical
4	Melons & Watermelon	$34.49M	High
5	Mixed/Other Vegetables	$21.15M	High
6	Cane/Beet Sugar	$8.61M	Moderate
7	Tropical Roots & Tubers	$4.27M	High
8	Mixed Fruit & Nuts	$3.74M	Low
9	Pineapple	$3.11M	Moderate
10	Citrus	$2.14M	High
11	Capsicum/Chili (Spice)	$1.74M	High
12	Other Vegetable Extracts	$1.38M	Critical
13	Bananas & Plantains	$814,484	Low
14	Cardamom	$432,206	Moderate
15	Tree Nuts	$402,847	Moderate
16	Solanaceous Vegetables	$391,599	Low
17	Cocoa	$346,532	Moderate
18	Legumes & Pulses	$320,340	Low
19	Melon Seed	$250,815	High
20	Cucurbits	$61,036	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Honduras does not have a national MRL list, instead defers to Codex. If no Codex MRL is established, then U.S. MRLs are accepted. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 99% of Honduras' commodity exports to the EU. Of the active substances and commodities reviewed, **5** have corresponding Codex and EU MRLs for **green coffee beans**, **15** for **limes**, **5** for **sweet potato**, **2** for **sugar can**e, and **none** for either **palm fruit** or **palm nuts.** Because Honduras relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for green coffee bean.

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Nicaragua

Trade Value Exposed	Dependency Tier	Value at Risk
$290.1M	**High**	**$266.3M**
2022-2024 avg, USD	20.1% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

The combination of Coffee and Groundnuts/Peanuts accounts for 81.6% of the value of Nicaragua's top 20 EU-bound commodity categories. HS-8 data shows that these two broad categories consist primarily of green coffee and peanuts, respectively, with peanuts split roughly 70/30 between shelled and food-use oil. The remaining top 20 categories are relatively small in absolute dollar terms.

In terms of dependency on the EU as an export market, Coffee and Groundnuts/Peanuts remain relevant with 25% of Coffee exports are EU-bound (a 'High' dependency tier), while the Groundnuts/Peanuts category is markedly more exposed at 35% ('Critical'). The Bananas/Plantains category, which HS-8 data confirms to be made up entirely of bananas, also merits highlighting given its 'High' dependency tier given that 21% of all of Nicaragua's banana exports are bound for the EU. Cocoa stands out further still, as 52% of Nicaragua's raw cocoa exports go to the EU.

Since Nicaragua accepts Codex MRLs, the top 98% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa and palm oil, they were excluded from this calculation because the Codex proxy method cannot assess them, so risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Coffee	$177.85M	High
2	Groundnuts/Peanuts	$58.78M	Critical
3	Bananas & Plantains	$17.28M	High
4	Cane/Beet Sugar	$15.64M	Moderate
5	Cocoa	$8.21M	Critical
6	Palm Oil	$7.61M	High
7	Mixed Fruit & Nuts	$1.37M	High
8	Tropical Roots & Tubers	$941,725	Low
9	Legumes & Pulses	$890,811	Low
10	Sesame Seed	$385,692	Moderate
11	Other Oilseeds	$354,325	Moderate
12	Mixed/Other Vegetables	$223,104	Low
13	Coconut	$218,977	Critical
14	Palm Nuts & Kernels	$176,292	Low
15	Barley	$72,318	Low
16	Turmeric	$67,174	High
17	Ginger	$61,005	Moderate
18	Tree Nuts	$20,719	Low
19	Other Vegetable Extracts	$17,252	Critical
20	Tea	$7,534	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Nicaragua does not have a national MRL list, instead defers to Codex. If no Codex MRL is established, then the less restrictive (higher value) MRL between the EU and U.S. is accepted. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 98% of Nicaragua's commodity exports to the EU. Of the active substances and commodities reviewed, **5** have corresponding Codex and EU MRLs for **green coffee beans**, **4** for **peanuts**, **10** for **banana**, **11** for **sugar beet**, **2** for **sugar cane**, **16** for **kidney bean**, **3** for **cassava root** and **none** for **cocoa bean** or **palm nut (palm oil kernels**). Because Nicaragua relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for green coffee bean and peanut.

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Active substances with peanut Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide
Imidacloprid	Insecticide
Tebuconazole	Fungicide

Panama

Trade Value Exposed	Dependency Tier	Value at Risk
$161M	**Critical**	**$136.1M**
2022-2024 avg, USD	37.1% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

Panama's trade with the European Union (EU) is defined by the Bananas/Plantains category, which accounts for roughly 75% of the value of top 20 commodity categories exported to the EU. The EU's HS-8 import data reveals that this category consists entirely of bananas rather than plantains. The remaining 19 categories are, relatively speaking, minor in absolute dollar terms.

The lens of dependency on the EU as a major export market highlights the vulnerability of Panama's top three exports to the EU, bananas, melons and watermelons, and pineapple. Of all bananas exported, 46% are EU-bound. Meanwhile, melons and watermelons, which HS-8 data shows to be entirely watermelons, are even more concentrated at 56% bound for the EU. Pineapples are the most exposed of the three with 80% of Panama's pineapple exports going to the EU.

Taken together banana and watermelon/melons represent Panama's primary points of exposure to changing EU MRL policy now and in the future. Based on its overall 'critical' exposure, it would be expected most of its trade value exposed would be at risk. Since Panama accepts Codex MRLs, the top 98% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa and palm oil, they were excluded from this calculation because the Codex proxy method cannot assess them with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Bananas & Plantains	$120.96M	Critical
2	Melons & Watermelon	$11.42M	Critical
3	Pineapple	$8.62M	Critical
4	Palm Oil	$7.13M	High
5	Other Oilseeds	$4.46M	Critical
6	Coffee	$3.31M	Moderate
7	Cocoa	$2.2M	Critical
8	Cane/Beet Sugar	$1.18M	Low
9	Papaya	$750,618	High
10	Tree Nuts	$222,183	Critical
11	Cucurbits	$221,357	Moderate
12	Grapes	$202,566	Moderate
13	Palm Nuts & Kernels	$106,182	Low
14	Other Sugars	$71,555	Critical
15	Citrus	$64,026	Low
16	Ginger	$27,294	High
17	Tropical Roots & Tubers	$26,458	Moderate
18	Berries	$24,645	Low
19	Olive Oil	$23,813	Critical
20	Mixed Fruit & Nuts	$17,932	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Panama defers first to Codex, then applies the more restrictive (lower value) MRL between the U.S. and EU. Panama does not apply a default. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 98% of Panama's commodity exports to the EU. Of the active substances and commodities reviewed, **10** have corresponding Codex and EU MRLs for **banana**, **11** for **beet sugar**, **5** for **green coffee bean**, **16** for **watermelon**, **2** for **sugar cane**, and **none** for **cocoa bean** or **palm nut (palm oil kernels)**. Because Panama relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for banana.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

CARIBBEAN

Trade Value Exposed	Dependency Tier	Value at Risk
$427M	**High**	**$293M**
2022-2024 avg, USD	27.5% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 16 other commodities detailed below.

Trade Narrative

As a region, the Caribbean's exports to the EU are dominated by the Bananas/Plantains and Cocoa categories, accounting for upwards of 75% of value of the region's top 20 commodities exported to the European Union (EU). The EU's detailed HS-8 data shows that these two broad categories are specifically comprised of bananas and raw cocoa rather than derivative or processed products. The remaining 18 top commodity categories are relatively minor.

The bananas category is particularly noteworthy for its 'critical' dependency on the EU as a consistent market; 60% of all bananas exported from the Caribbean are EU-bound. The Other Vegetable Extracts category carries an even higher dependency at 85% however, the available trade data does not specify the contents of that category, which limits how actionable this particular finding is. Cocoa and Mangoes/Guavas also merit the same 'Critical' dependency label, at around 35%. All said, the Caribbean's MRL exposure is concentrated in few commodities.

Because these Caribbean countries accept, or are assumed to accept, Codex MRLs, the top 99% of commodity exports were considered to calculate value at risk. Cocoa was excluded from this calculation because no active substance in scope has both an EU and a Codex MRL for cocoa beans; the risk to these exports could therefore not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Bananas & Plantains	$200.57M	Critical
2	Cocoa	$123.8M	Critical
3	Avocado	$30.75M	High
4	Mango, Guava & Mangosteen	$24.04M	Critical
5	Other Vegetable Extracts	$15.81M	Critical
6	Coffee	$7.54M	Moderate
7	Cane/Beet Sugar	$7.31M	Low
8	Barley	$2.72M	Low
9	Citrus	$2.18M	Moderate
10	Tomatoes	$2.11M	Moderate
11	Nutmeg & Mace	$1.76M	High
12	Mixed Fruit & Nuts	$1.62M	Low
13	Legumes & Pulses	$1.29M	Moderate
14	Mixed/Other Vegetables	$1.16M	Low
15	Tree Nuts	$959,651	Moderate
16	Solanaceous Vegetables	$748,884	Low
17	Pineapple	$730,547	Moderate
18	Other Oilseeds	$682,734	Critical
19	Grapes	$643,734	Low
20	Tropical Roots & Tubers	$512,489	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

The Caribbean countries are grouped together for the purposes of this study. **Antigua and Barbuda** MRL policy is set by the Minister according to the 2008 Act, but unclear if the policy states specific values or a full deferral policy to Codex. The **Bahamas** does not maintain its own national MRL list and likely accepts Codex and/or U.S. MRLs. **Barbados** defers to Codex and largely follows U.S. EPA guidance. **Dominican Republic** defers to Codex, but when no Codex MRL exists, the U.S. MRL applies. If there is no U.S. MRL then EU MRL applies. **Jamaica** does not currently have a national MRL regulation in effect. A draft regulation, circulated in 2018, indicates a deferral first to Codex, then to the lower of the U.S. or EU MRLs. Exporters are currently recommended to follow Codex. **Dominica, Grenada, Haiti,** and **Trinidad and Tobago** (may also accept U.S.) defer to Codex. MRL policies for **Saint Kitts and Nevis**, **Saint Lucia**, and **Saint Vincent and the Grenadines** are unknown, but might accept Codex. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities in this region.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The Caribbean region was reviewed based on the top 99% of commodity exports to the EU. For the Caribbean countries the primary exports were **avocados**, **banana**, **cocoa bean, mango, tomato, lemon, wine grapes, and cassava root**. Of the active substances and commodities reviewed, **5** have corresponding EU and Codex MRLs for **avocado**, **10** for **banana**, 9 for **mango**, 26 for **tomato**, 15 for **lemon**, 21 for **wine grapes**, 3 for **cassava root** and there are **none** for **cocoa bean.** Because the Caribbean countries primarily rely on Codex, a specific MRL assessment is limited. Below are a few of the active substances that might be impacted for banana and avocado.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

Active substances with avocado Codex and EU MRLs

Active Substance	Pesticide Type
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Spirodiclofen	Insecticide

Antigua and Barbuda

Trade Value Exposed	Dependency Tier	Value at Risk
$269K	**Low**	**$243k**
2022-2024 avg, USD	2.1% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

About 65% of Antigua and Barbuda's exports to the EU consist of wine (27%), dried beans, mainly kidney beans (16%), and frozen strawberries (20%). The remaining exports include maté (8%), shelled groundnuts (8%), rice (8%) and coffee (3%). EU imports averaged US$268.8 thousand per year over 2022–24.

Antigua and Barbuda has a **low dependency** on the EU market: only 2.1% of its agri-food exports (2022–24 average, $12.9 million per year) were destined to the EU. The EU is the main outlet for some smaller products: it takes 94% of frozen strawberry exports and 78% of rice exports.

MRL Insight

Under section 15(1)(e) of the Pesticides and Toxic Chemicals Act, 2008 (No. 12 of 2008), the Minister may make regulations prescribing maximum permissible levels of controlled products in produce at the time of marketing or sale. The Act does not refer to Codex Alimentarius, and it is unclear whether regulations made under it set specific values or defer to Codex. Because the country has not set its own national MRLs, Codex MRLs were used as a proxy to assess the potential impact on its exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 98% of Antigua and Barbuda's exports to the EU. Except for **yerba mate**, every commodity reviewed has at least one Codex MRLs and could therefore be affected by changes to EU MRL policy.

Of the **45** active substances with Codex MRLs, **18** have both an EU and a Codex MRL for **strawberries**, **21** for **wine grapes**, **16** for **kidney beans**, **5** for **coffee beans** and **none** for **yerba mate**.

Active substances with strawberry Codex and EU MRLs

Active Substance	Pesticide Type	Active Substance	Pesticide Type
Acibenzolar-S-methyl	Fungicide	*Fludioxonil*	Fungicide
Alpha-Cypermethrin	Insecticide	*Glufosinate*	Herbicide
Beta-Cypermethrin	Insecticide	*Mancozeb*	Fungicide
Clofentezine	Insecticide	*Maneb*	Fungicide
Cyprodinil	Fungicide	*Metiram*	Fungicide
Difenoconazole	Fungicide	*Myclobutanil*	Fungicide
Dimethomorph	Fungicide	*Quinoxyfen*	Fungicide
Diquat	Herbicide	*Spirodiclofen*	Insecticide
Fenazaquin	Insecticide	*Sulfoxaflor*	Insecticide

Bahamas

Trade Value Exposed	Dependency Tier	Value at Risk
$19K	**Moderate**	**$4k**
2022-2024 avg, USD	11% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

The Bahamas' exports to the EU are very small, averaging $19 thousand per year over 2022–24. 99% of exports to the EU are comprised of cocoa products, beer, and wine. Cocoa products make up 78% of the total, followed by beer (16%) and wine (5%).

The Bahamas shows a **moderate dependency** on the EU, with 11.0% of its exports (2022–24 average) destined to the EU. Total world exports are only US$172.6 thousand per year (2022–24 average), so a single shipment can move this ratio sharply.

MRL Insight

The Bahamas does not maintain a national MRL list and is understood to rely on Codex Alimentarius and/or U.S. MRLs. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 99% of the Bahamas' exports to the EU: cocoa beans, beer and sparkling wine. Each product was assessed against its raw agricultural commodity: wine grapes for wine, and barley and hops for beer.

Of the 45 active substances with Codex MRLs, **21** have both an EU and a Codex MRL for **wine grapes**, **12** for **hops** and **12** for **barley**. None have both an EU and a Codex MRL for **cocoa beans**.

Active substances with wine grape Codex and EU MRLs

Active Substance	Pesticide Type	Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide	*Glufosinate*	Herbicide
Benalaxyl	Fungicide	*Imidacloprid*	Insecticide
Beta-Cypermethrin	Insecticide	*Mancozeb*	Fungicide
Bifenthrin	Insecticide	*Maneb*	Fungicide
Clofentezine	Insecticide	*Metiram*	Fungicide
Cyprodinil	Fungicide	*Myclobutanil*	Fungicide
Difenoconazole	Fungicide	*Quinoxyfen*	Fungicide
Dimethomorph	Fungicide	*Spirodiclofen*	Insecticide
Famoxadone	Fungicide	*Sulfoxaflor*	Insecticide
Flubendiamide	Insecticide	*Tebuconazole*	Fungicide
Fludioxonil	Fungicide		

Barbados

Trade Value Exposed	Dependency Tier	Value at Risk
$216K	**Low**	**$214K**
2022-2024 avg, USD	2.5% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Raw cane sugar accounts for 68% of Barbados' exports to the EU, followed by Brazil nuts (19%), other vegetable fats and oils (9%) and beer (4%). EU imports averaged $215.5 thousand per year over 2022–24.

Barbados has a **low dependency** on the EU market, with 2.5% of its exports (2022–24 average) destined to the EU. The EU takes 12% of Barbados' raw sugar exports and is otherwise a marginal outlet.

MRL Insight

Barbados does not maintain a national MRL list and defers fully to Codex Alimentarius. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 99% of Barbados' exports to the EU: raw cane sugar, Brazil nuts, other vegetable oils and beer. Each product was assessed against its raw agricultural commodity: barley and hops for beer. While the HS code does not name the oilseed, multiple oilseeds have Codex MRLs established for the substances in scope. For this reason, the study considered that every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Of the 45 active substances with Codex MRLs, **12** have both an EU and a Codex MRL for **hops**, **12** for **barley**, **6** for **Brazil nuts** and **2** for **sugar cane**.

Active substances with Brazil Nut Codex and EU MRLs

Active Substance	Pesticide Type
Bifenthrin	Insecticide
Cyprodinil	Fungicide
Fenazaquin	Insecticide
Flubendiamide	Insecticide
Glufosinate	Herbicide
Spirodiclofen	Insecticide

Active substances with sugar cane Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide
Beta-Cypermethrin	Insecticide

Dominica

Trade Value Exposed	Dependency Tier	Value at Risk
$730K	**High**	**$277K**
2022-2024 avg, USD	21% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Dominica's exports to the EU are small and varied considerably over the period, averaging about $730 thousand a year in 2022–24. Cocoa beans account for 60% of the three-year average, but almost all of that trade took place in 2024 (about $1.3 million). The other main exports were prepared peas (9%, also recorded only in 2024), ginger (8%), taro (8%) and yams (4%). The remaining exports include root-crop flours, preserved citrus and mangoes.

Dominica has a **high dependency** on the EU market, with 20.7% of its exports (2022–24 average) destined to the EU.

MRL Insight

Dominica does not maintain a national MRL list and defers fully to Codex. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 97% of Dominica's exports to the EU. The main exports were cocoa beans, preserved peas, ginger and taro (dasheen), followed by yams, root and tuber flour, prepared citrus fruit, mangoes, yautia (tannia), avocados and plantains. Each processed product was assessed against its raw agricultural commodity: peas for preserved peas, citrus fruit for prepared citrus, and the relevant roots and tubers for root and tuber flour.

Except for cocoa beans, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy. Of the 45 active substances with Codex MRLs, **5** have both an EU and a Codex MRL for **peas**, **2** for **ginger** and **3** for **taro**. **None** have both for **cocoa beans**.

Active substances with pea Codex and EU MRLs

Active Substance	Pesticide Type
Bifenthrin	Insecticide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Flubendiamide	Insecticide
Fludioxonil	Fungicide

Dominican Republic

Trade Value Exposed	Dependency Tier	Value at Risk
$405M	**Critical**	**$277.5M**
2022-2024 avg, USD	31.5% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

The Dominican Republic's exports to the EU averaged $404.86 million per year over 2022–24. Bananas (49%) and cocoa products (29%) together make up 78% of its EU exports. They are followed by avocados (8%), mangoes and guavas (6%) and vegetable saps and extracts (4%). The remaining exports, include coffee, fresh tomatoes and cane molasses.

The Dominican Republic has a **critical dependency** on the EU market: 31.5% of its exports (2022–24 average, $1.29 billion per year) were destined to the EU. Dependency is concentrated in its leading products. The EU takes 62% of its banana exports, 39% of mango and guava exports, 37% of cocoa exports, 25% of avocado exports and 90% of vegetable saps and extracts.

MRL Insight

The Dominican Republic applies Codex MRLs. Where no Codex MRL exists, it applies the U.S. MRL, and where neither exists, it applies the EU MRL. Codex MRLs were therefore used as the main proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 97% of the Dominican Republic's exports to the EU, mainly bananas, cocoa beans and avocados. Except for cocoa beans, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Of the **45** active substances with Codex MRLs, **10** have both an EU and a Codex MRL for **bananas** and **5** for **avocados**. **None** have both for **cocoa beans**. Because the Dominican Republic relies mainly on Codex, a country-specific MRL assessment is limited. The active substances most likely to affect bananas are listed below.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

Grenada

Trade Value Exposed	Dependency Tier	Value at Risk
$2.8M	**High**	**$1.7M**
2022-2024 avg, USD	16% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Nearly all of Grenada's agri-food exports to the EU consist of nutmeg (63%) and cocoa products (35%). The remainder are mace, arrowroot and ginger. EU imports averaged $2.76 million per year over 2022–24.

Grenada has a **high dependency** on the EU market, with 16.0% of its exports (2022–24 average, $17.19 million per year) destined to the EU. The EU is the dominant buyer of Grenadian cocoa, taking 91% of cocoa exports, and 25% of nutmeg, Grenada's leading export (41% of world exports).

MRL Insight

Grenada does not maintain a national MRL list and defers fully to Codex. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The assessment covered the commodities that account for the top 98% of Grenada's exports to the EU: nutmeg (whole and ground, 63% combined) and cocoa beans (35%).

Of the 45 active substances with Codex MRLs, **1** has both an EU and a Codex MRL for **nutmeg**. **None** have both for **cocoa beans**. Grenada's exposure to changes in EU MRL policy is therefore limited to a small number of active substances, but because its exports are concentrated in just two commodities, any change affecting nutmeg could have a significant impact.

Active substance with nutmeg Codex and EU MRL

Active Substance	Pesticide Type
Difenoconazole	Fungicide

Haiti

Trade Value Exposed	Dependency Tier	Value at Risk
$3.4M	**High**	**$955K**
2022-2024 avg, USD	20% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Haiti's exports to the EU averaged $3.43 million a year in 2022–24. About 92% consisted of cocoa products (67%) and citrus peel (25%), which were the two leading products in every year. The remaining exports include oranges, rice, beer, castor oil and garlic.

Haiti has a **high dependency** on the EU market, with 20.3% of its exports (2022–24 average, $16.91 million per year) destined to the EU. The EU purchases 94% of Haiti's citrus peel exports and 27% of its cocoa exports. Because oranges are also used to assess citrus peel, the active substances affecting oranges are relevant to about 26% of Haiti's exports to the EU.

MRL Insight

Haiti does not maintain a national MRL list and defers to international standards, including Codex. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL. The assessment covered the commodities that account for the top 96% of Haiti's exports to the EU. The main exports were **cocoa beans** (67%) and **citrus or melon peel** (25%), followed by smaller values of **oranges**, **beer**, **garlic** and **rice**. Castor oil and crude palm oil also fall within the top 96% but were excluded from the MRL assessment because they are not food products. Processed products were assessed against their raw agricultural commodities: citrus peel against oranges, and beer against barley and hops.

Except for **cocoa beans**, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy. Of the 45 active substances with Codex MRLs, **21** have both an EU and a Codex MRL for **oranges** (also applied to citrus peel), **12** for **hops**, **10** for **garlic**, **12** for barley, and **6** for **rice**. **None have** both for **cocoa beans**.

Active substances with orange Codex and EU MRLs

Active Substance	Pesticide Type	Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide	*Imidacloprid*	Insecticide
Beta-Cyfluthrin	Insecticide	*Lufenuron*	Insecticide
Beta-Cypermethrin	Insecticide	*Malathion*	Insecticide
Bifenthrin	Insecticide	*Mancozeb*	Fungicide
Clofentezine	Insecticide	*Maneb*	Fungicide
Cyfluthrin	Insecticide	*Metiram*	Fungicide
Difenoconazole	Fungicide	*Propargite*	Insecticide
Fenazaquin	Insecticide	*Spirodiclofen*	Insecticide
Fenbuconazole	Fungicide	*Sulfoxaflor*	Insecticide
Fludioxonil	Fungicide	*Tebuconazole*	Fungicide
Glufosinate	Herbicide		

Jamaica

Trade Value Exposed	Dependency Tier	Value at Risk
$3.6M	**Low**	**$2.7M**
2022-2024 avg, USD	1.8% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Jamaica's exports to the EU averaged about $3.6 million a year from 2022–24. Coffee was the largest export in every year, averaging 42%, followed by kola nuts (15%), wine products (14%) and dried chillies/pimenta (13%). The remaining exports include cocoa (7%) and citrus hybrids (5%). EU imports averaged $3.62 million per year over 2022–24.

Jamaica has a **low dependency** on the EU market: only 1.8% of its exports (2022–24 average) were destined to the EU.

MRL Insight

Jamaica does not currently have a national MRL regulation in effect. A draft regulation circulated in 2018 indicates deferral first to Codex, then to the lower of the U.S. or EU MRLs; exporters are currently recommended to follow Codex. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The assessment covered the commodities that account for the top 96% of Jamaica's exports to the EU, including coffee, kola nuts, vermouth and other flavoured wines, dried allspice/pimento, and cocoa beans. Processed products were assessed against their raw agricultural commodities, for example wine grapes for vermouth and flavoured wine. Dried *Capsicum/Pimenta* fruit was assessed as allspice, which is understood to be Jamaica's main product under this code.

Except for **cocoa beans** and **kola nuts**, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy. Of the 45 active substances with Codex MRLs, **21** have both an EU and a Codex MRL for **wine grapes**, **8** for **allspice/pimento**, **5** for **coffee** and **3** for **cassava**. None have both for cocoa beans or kola nuts.

Active substances with wine grape Codex and EU MRLs

Active Substance	Pesticide Type	Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide	*Glufosinate*	Herbicide
Benalaxyl	Fungicide	*Imidacloprid*	Insecticide
Beta-Cypermethrin	Insecticide	*Mancozeb*	Fungicide
Bifenthrin	Insecticide	*Maneb*	Fungicide
Clofentezine	Insecticide	*Metiram*	Fungicide
Cyprodinil	Fungicide	*Myclobutanil*	Fungicide
Difenoconazole	Fungicide	*Quinoxyfen*	Fungicide
Dimethomorph	Fungicide	*Spirodiclofen*	Insecticide
Famoxadone	Fungicide	*Sulfoxaflor*	Insecticide
Flubendiamide	Insecticide	*Tebuconazole*	Fungicide
Fludioxonil	Fungicide		

Saint Kitts and Nevis

Trade Value Exposed	Dependency Tier	Value at Risk
$9K	**Low**	**$8.6K**
2022-2024 avg, USD	0.2% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Saint Kitts and Nevis' agri-food exports to the EU are negligible, averaging $8.6 thousand per year over 2022–24. Prepared beans account for 90% and beer for 9%.

Saint Kitts and Nevis has a very **low dependency** on the EU market: 0.2% of its exports (2022–24 average) were destined to the EU. Its world exports ($4.44 million per year) are dominated by beer (62%), prepared pineapples (15%) and wine products (9%).

MRL Insight

Saint Kitts and Nevis does not have a clear MRL policy as no published MRL policy was identified. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The assessment covered the commodities that account for the top 99% of Saint Kitts and Nevis' exports to the EU: preserved beans and beer. Each product was assessed against its raw agricultural commodity. Preserved beans were assessed against beans with pods, and beer against barley and hops. Both commodities have at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Of the 45 active substances with Codex MRLs, **12** have both an EU and a Codex MRL for **hops**, **12** for **barley** and **7** for **beans with pods**.

Active substances with bean with pods Codex and EU MRLs

Active Substance	Pesticide Type
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Flubendiamide	Insecticide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Tebuconazole	Fungicide

Saint Lucia

Trade Value Exposed	Dependency Tier	Value at Risk
$70K	**Low**	**$42.5K**
2022-2024 avg, USD	0.4% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

About 61% of Saint Lucia's agri-food exports to the EU consist of seaweed (33%) and beer (28%). The remaining exports include coffee (11%), cinnamon (11%) and other spices. EU imports are small, averaging $70.2 thousand per year over 2022–24.

Saint Lucia has a **low dependency** on the EU market, with 0.4% of its exports (2022–24 average) destined to the EU. Its world exports ($18.53 million per year) are dominated by beer (71%), followed by wheat flour (10%), seaweed (9%) and bananas (4%).

MRL Insight

Saint Lucia does not have a clear MRL policy as no published MRL policy was identified. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The assessment covered the commodities that account for the top 95% of Saint Lucia's exports to the EU: seaweed, beer, coffee and cinnamon, followed by smaller volumes of other spices, nutmeg, palm kernel oil, refined sugar and other vegetable products. Beer was assessed against its raw agricultural commodities, barley and hops.

Of the 45 active substances with Codex MRLs, **12** have both an EU and a Codex MRL for **hops**, **12** for **barley**, **5** for **coffee** and 1 for **cinnamon**. **None** have both for **seaweed**. Except for seaweed, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Saint Vincent and the Grenadines

Trade Value Exposed	Dependency Tier	Value at Risk
$453K	**Low**	**$232K**
2022-2024 avg, USD	3.8% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Saint Vincent and the Grenadines' exports to the EU averaged about $453 thousand a year in 2022–24. About 96% of Saint Vincent and the Grenadines' exports to the EU consist of cocoa products (48%) and taro (48%). Coffee makes up most of the remainder (3%).

Saint Vincent and the Grenadines has a **low dependency** on the EU market, with 3.8% of its exports (2022–24 average) destined to the EU. The EU is, however, the main market for its taro, taking 87% of taro exports. World exports ($11.86 million per year) are dominated by wheat flour (57%), beer (10%) and arrowroot (9%).

MRL Insight

Saint Vincent and the Grenadines does not have a clear MRL policy as no published MRL policy was identified. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The assessment covered the commodities that account for the top 99% of Saint Vincent and the Grenadines' exports to the EU: cocoa beans, taro, also known as dasheen, and coffee.

Of the 45 active substances with Codex MRLs, **5** have both an EU and a Codex MRL for **coffee** and 3 for **taro**. **None** have both for **cocoa beans**. Except for cocoa beans, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Trinidad and Tobago

Trade Value Exposed	Dependency Tier	Value at Risk
$2.2M	**Low**	**$1.9M**
2022-2024 avg, USD	2.7% of exports by value are EU-bound	2022-2024 avg, USD

Trade Narrative

Trinidad and Tobago's exports to the EU averaged about $2.2 million a year in 2022–24. Beer was the leading export every year, accounting for 79% of the country's exports to the EU, followed by cocoa products (9%) and prepared nut and seed mixtures (8%). The remaining exports include syrups, raisins, prepared potatoes and spices.

Trinidad and Tobago has a **low dependency** on the EU market: 2.7% of its exports (2022–24 average) were destined to the EU. Its world exports ($79 million per year) are diversified across beer (17%), prepared groundnuts (15%), pineapple juice (10%) and nut mixtures (9%).

MRL Insight

Trinidad and Tobago does not maintain a national MRL list and defers to Codex MRLs. It may also accept U.S. MRLs. Codex MRLs were therefore used as a proxy to assess the potential impact on the country's exports.

Of the 63 active substances on the EU list, 45 have at least one Codex MRL. The MRL assessment covered the commodities that account for the top 97% of Trinidad and Tobago's exports to the EU, including beer, cocoa beans, and caramel and sultanas. Processed products were assessed against their raw agricultural commodities: beer against barley and hops, caramel against sugar cane, and sultanas against grapes.

Of the 45 active substances with Codex MRLs, **19** have both an EU and a Codex MRL for **grapes**, **12** for **hops**, **12** for **barley** and **2** for **sugar cane**. **None** have both for **cocoa beans**. Except for cocoa beans, every commodity reviewed has at least one Codex MRL and could therefore be affected by changes to EU MRL policy.

Active substances with grape Codex and EU MRLs

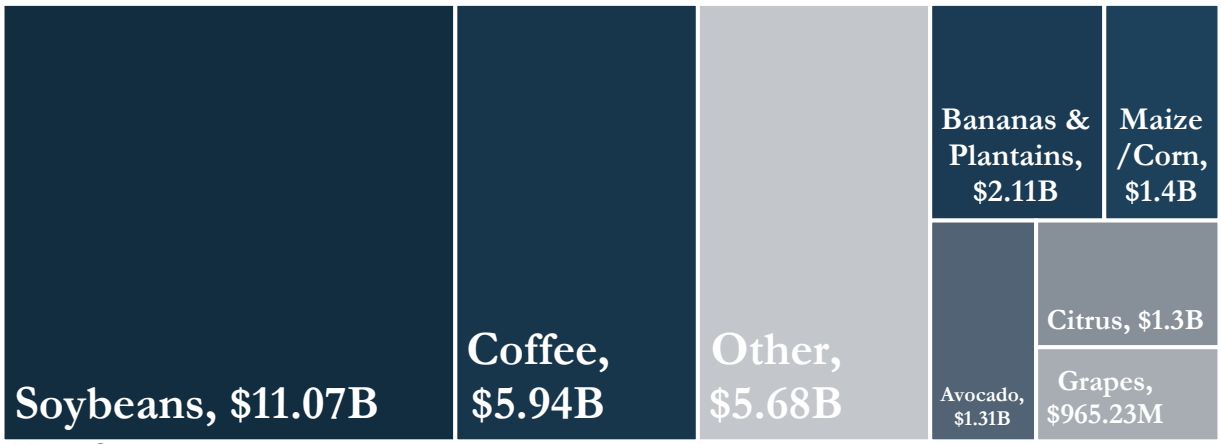
Active Substance	Pesticide Type	Active Substance	Pesticide Type
Benalaxyl	Fungicide	*Imidacloprid*	Insecticide
Beta-Cypermethrin	Insecticide	*Mancozeb*	Fungicide
Bifenthrin	Insecticide	*Maneb*	Fungicide
Alpha-Cypermethrin	Insecticide	*Metiram*	Fungicide
Cyprodinil	Fungicide	*Myclobutanil*	Fungicide
Difenoconazole	Fungicide	*Quinoxyfen*	Fungicide
Dimethomorph	Fungicide	*Spirodiclofen*	Insecticide
Flubendiamide	Insecticide	*Sulfoxaflor*	Insecticide
Fludioxonil	Fungicide	*Tebuconazole*	Fungicide
Glufosinate	Herbicide		

SOUTH AMERICA

Trade Value Exposed
$29.7B
2022-2024 avg, USD

Dependency Tier
High
16.9% of exports by value are EU-bound

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 13 other commodities detailed below.

Trade Narrative

Soybeans and Coffee dominate South America's top 20 export categories bound for the European Union (EU). Together they account for roughly $17B, which is 57% of all value in the top 20. Notably, according to EU import data, the Coffee category is primarily (97%, $5.7B) comprised of green coffee. Similarly, the third commodity category, Bananas/Plantains, is approximately 95% made up of fresh bananas, rather than plantains.

Both the Coffee and Bananas/Plantains categories are also notable for falling into the 'critical' dependency bucket, with 37% and 35% of each category's exports, respectively, bound for the EU. Similarly, the fifth largest commodity category, Avocados, is worth highlighting for its 'critical' dependency on the EU market. Indeed, 49% of all avocados exported from South America are destined for the EU, making the category particularly vulnerable to disruptions due to potential policy changes. Additionally, the Soybean Oilcake specific category of 'Soybeans' is notable for carrying a 'critical' dependency tier with 34% of oilcake exports bound for the EU.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$11.07B	Moderate
2	Coffee	$5.94B	Critical
3	Bananas & Plantains	$2.11B	Critical
4	Maize/Corn	$1.4B	Moderate
5	Avocado	$1.31B	Critical
6	Citrus	$1.3B	High
7	Grapes	$965.23M	Moderate
8	Groundnuts/Peanuts	$827.51M	Critical
9	Cocoa	$693.41M	High
10	Berries	$634.86M	High
11	Mixed/Other Vegetables	$627.43M	Critical
12	Tree Nuts	$458.31M	Critical
13	Mango, Guava & Mangosteen	$446.85M	Critical
14	Mixed Fruit & Nuts	$376.79M	High
15	Cane/Beet Sugar	$339.67M	Low
16	Sunflower Seed	$299.93M	Critical
17	Rice	$280.63M	High
18	Pome Fruit	$253.41M	High
19	Palm Oil	$236.69M	High
20	Melons & Watermelon	$200.3M	Critical

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

Argentina

Trade Value Exposed	Dependency Tier	Value at Risk
$4.73B	**Moderate**	**$4.62B**
2022-2024 avg, USD	14.5% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

Taken together, the Soybeans (59.2%) and Groundnuts/Peanuts (14.7%) categories account for nearly 75% of the top 20 categories Argentina exports to the European Union (EU). The EU's HS-8 data shows that 95% ($2.69B) of the soybeans category is oilcake and other solid residues, likely bound for livestock feed. The Groundnuts/Peanuts category is, on the other hand, not explicitly categorized as 'peanuts'. However, Argentinian production trends suggest that peanuts make up the vast majority, if not all of this export category.

The Groundnuts/Peanuts (57%), Sunflower Seed (55%), Mixed/Other Vegetables (46%), and Citrus (37%) categories are all notable for meriting a 'critical' dependency label, given the high share of Argentina's exports in each category destined for the EU. Of these, Citrus is the most diverse category, comprised of 48% fresh/dried lemons, 16% fresh oranges and orange juice, 32% other single citrus juice (excluding orange and grapefruit) whose composition cannot be parsed at the HS-8 level, and lastly, a marginal mix other citrus (~4%). The Mixed/Other Vegetables category is notably largely (96%) dominated by acorns, horse-chestnuts, and other non-pellet vegetable material meant for animal feed.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$2.82B	High
2	Groundnuts/Peanuts	$695.4M	Critical
3	Sunflower Seed	$250.79M	Critical
4	Mixed/Other Vegetables	$224.48M	Critical
5	Citrus	$164.42M	Critical
6	Legumes & Pulses	$146.6M	High
7	Grapes	$118.99M	Moderate
8	Rice	$66.59M	High
9	Maize/Corn	$61.45M	Low
10	Pome Fruit	$59.28M	Moderate
11	Sunflower/Safflower Oil	$19.13M	Low
12	Alliums	$18.08M	Moderate
13	Berries	$15.78M	High
14	Stone Fruit	$15.51M	Moderate
15	Tree Nuts	$14.3M	Critical
16	Tea	$11.31M	Moderate
17	Maté	$10.06M	Critical
18	Mustard Seed	$8.1M	Critical
19	Alfalfa & Forage	$7.81M	Moderate
20	Mixed Fruit & Nuts	$6.86M	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Argentina maintains a national MRL list, deferring to Codex in the absence of an established national MRL. When there is no established national or Codex MRL, a default MRL of 0.01 ppm is applied.

Of the 63 active substances on the EU list, 52 have at least one established Argentinian MRL. Based on the trade data analysis, this assessment reviewed these 52 substances across more than 80 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were 47 commodities with at least one established Argentinian and EU MRLs. Of these, **26 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Argentinian producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Argentinian MRLs established for various citrus fruit, such as **65%** of **lemon**, **10%** of **mandarins (tangerines), 9%** of **sweet orange, 9%** of **grapefruit,** and **8%** of **lime** MRLs are at risk of being eliminated if the policy is implemented. While **12%** of Argentinian **winter squash** MRLs are at risk of having their established EU MRLs deleted, and **8%** of **field peas, 6%** of **dry field beans, 5%** of **lentils, 4%** of **sunflower,** and **1%** of **peanut** MRLs.

There were four substances that impact **over 20 commodities each**. The herbicide glufosinate and mancozeb both impact 23 commodities each. The fungicides difenoconazole and tebuconazole impact 21 and 20 commodities respectively.

Active Substance	Commodities Impacted (#)
Glufosinate	23
Mancozeb	23
Difenoconazole	21
Tebuconazole	20
Fludioxonil	16
Bifenthrin	9
Diquat	9
Flubendiamide	9
Imidacloprid	9
Myclobutanil	9
Cyprodinil	8
Malathion	8
Lufenuron	7
Spirodiclofen	7
Fenazaquin	6
Sulfoxaflor	6
Cyfluthrin	5
Pendimethalin	5
Quinoxyfen	4
Tetraconazole	4
Alpha-Cypermethrin	3
Benalaxyl	3
Beta-Cyfluthrin	3
Clofentezine	3
Cyproconazole	3
Dimethomorph	3
Esfenvalerate	3
Fenbuconazole	3
Isopyrazam	3
Metiram	3
Beta-Cypermethrin	2
Carbaryl	2
Chlorpropham	2
Famoxadone	2
Paclobutrazol	2
Propargite	2
Prothioconazole	2
Acetochlor	1
Dimoxystrobin	1

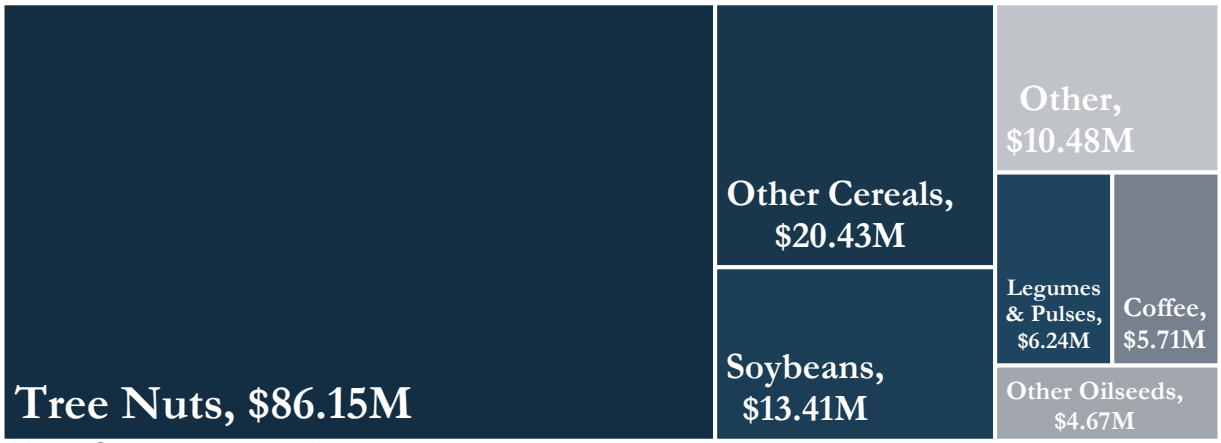
Active Substance	Commodities Impacted (#)
Flufenacet	1
Flurochloridone	1
Flusilazole	1
Halosulfuron-methyl	1
Indoxacarb	1
Ipconazole	1
Iprodione	1

Active Substance	Commodities Impacted (#)
Linuron	1
Metconazole	1
Metribuzin	1
Oxyfluorfen	1
Permethrin	1
Picoxystrobin	1

Bolivia

Trade Value Exposed	Dependency Tier	Value at Risk
$147M	**Moderate**	**$131.5M**
2022-2024 avg, USD	6.07% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

On a high level, Bolivia is less exposed to the European Union (EU) than some of its counterparts. However, the Tree Nuts category, which accounts for 58% of the value of the top 20 commodity categories bound for the EU, does fall into the 'Critical' exposure bucket. HS-8 import data shows that the Tree Nuts flow to the EU is primarily comprised of brazil nuts. As such, the active ingredients used on Brazil nuts, and their associated EU maximum residue levels (MRLs), warrant close monitoring to minimize disruption risk.

The Other Cereals category, which carries a "High" exposure rating, is a distant second among Bolivia's top 20 EU-exported categories. It is still worth highlighting, as the HS-8 data, similarly in some respects to the Tree Nuts category, reveals that the Other Cereals category consists almost entirely of quinoa ($20M). Consequently, monitoring quinoa-specific MRLs should be a priority.

Since Bolivia accepts Codex MRLs, the top 97% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa, it was excluded from this calculation because the Codex proxy method cannot assess it, with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Tree Nuts	$86.15M	Critical
2	Other Cereals	$20.43M	High
3	Soybeans	$13.41M	Low
4	Legumes & Pulses	$6.24M	High
5	Coffee	$5.71M	Critical
6	Other Oilseeds	$4.67M	High
7	Cocoa	$3.69M	Critical
8	Sesame Seed	$3.32M	High
9	Citrus	$1.51M	Critical
10	Groundnuts/Peanuts	$508,002	Low
11	Mixed/Other Vegetables	$463,298	Moderate
12	Other Spices	$238,244	Critical
13	Palm Hearts	$175,132	Low
14	Maize/Corn	$140,440	Low
15	Sunflower/Safflower Oil	$124,829	Low
16	Mixed Fruit & Nuts	$110,637	Moderate
17	Barley	$65,475	Low
18	Grapes	$62,259	Critical
19	Other Tropical/Exotic Fruit	$55,330	Critical
20	Capsicum/Chili (Spice)	$19,521	High

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Bolivia does not maintain a national MRL list, instead defers fully to Codex. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 97% of Bolivia's commodity exports to the EU. Of the active substances and commodities reviewed, **6** have corresponding Codex and EU MRLs for **brazil nuts, 3** for **quinoa**, **13** for **soybean**, **16** for **kidney bean**, **5** for **green coffee bean**, **4** for **peanut**, and **none** for **cocoa bean**. Because Bolivia relies entirely on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for brazil nut, quinoa, and soybean.

Active substances with brazil nut Codex and EU MRLs

Active Substance	Pesticide Type
Bifenthrin	Insecticide
Cyprodinil	Fungicide
Fenazaquin	Insecticide
Flubendiamide	Insecticide
Glufosinate	Herbicide
Spirodiclofen	Insecticide

Active substances with quinoa Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide
Cyproconazole	Fungicide

Active substances with soybean Codex and EU MRLs

Active Substance	Pesticide Type
Beta-Cyfluthrin	Insecticide
Bifenthrin	Insecticide
Cyfluthrin	Insecticide
Cyproconazole	Fungicide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Diquat	Herbicide
Flubendiamide	Insecticide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Prothioconazole	Fungicide
Sulfoxaflor	Insecticide
Tebuconazole	Fungicide

Brazil

Trade Value Exposed	Dependency Tier	Value at Risk
$16.1B	**High**	**$15.4B**
2022-2024 avg, USD	15.6% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 16 other commodities detailed below.

Trade Narrative

The Soybean and Coffee categories dominate Brazil's top 20 export categories to the European Union (EU), making up 49.7% and 28.2% of all value on average respectively. The EU's HS-8 data reveals that the Coffee category is primarily (98%) green coffee. The Soybean category, meanwhile, is split between oilcake and extraction residues for livestock feed (56%) and whole soybeans (43%).

Citrus is noteworthy for its 'high' dependency level with 28% of Brazil's Citrus exports going to the EU. Notably, the Citrus category is comprised primarily of orange juice (~82%), fresh/dried limes (15%), and a mix of relatively marginal other citrus commodities (~3%). Similarly, the Mango, Guava & Mangosteen category merits a 'critical' dependency label for 47% of all of Brazil's exports of said category going to the EU. Unfortunately, however, the trade data does not allow for a more specific breakdown, but production trends suggest it is dominated by mangoes.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$7.98B	Moderate
2	Coffee	$4.54B	Critical
3	Maize/Corn	$1.28B	Moderate
4	Citrus	$998.14M	High
5	Mango, Guava & Mangosteen	$255.21M	Critical
6	Cane/Beet Sugar	$235.72M	Low
7	Melons & Watermelon	$200.28M	Critical
8	Groundnuts/Peanuts	$125.16M	High
9	Papaya	$75.19M	Critical
10	Grapes	$66.91M	High

#	Commodity Category	EU Trade Value	EU Dependency
11	Mixed/Other Vegetables	$57.15M	Critical
12	Mixed Fruit & Nuts	$56.36M	High
13	Pepper (Piper)	$48.57M	High
14	Ginger	$40.68M	Critical
15	Rice	$27.09M	Moderate
16	Avocado	$24.5M	Critical
17	Tree Nuts	$22.63M	High
18	Other Cereals	$15.11M	Moderate
19	Tropical Roots & Tubers	$13.54M	High
20	Palm Oil	$10.96M	Critical

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Brazil maintains an independent national MRL list but defers to Codex for imported products when a national MRL is not established (except for unauthorized pesticides).

Of the 63 active substances on the EU list, **36** have at least one established Brazilian MRL. Based on the trade data analysis, this assessment reviewed these 36 substances across more than 80 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were 52 commodities with at least one established Brazilian and EU MRLs. Of these, **over 30 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Brazilian producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Brazilian MRLs established for various citrus, such as, **mandarins (tangerines), lime**, **lemon**, and **grapefruit** each have **10% of their MRLs at risk of being eliminated,** while **sweet oranges** are slightly higher with **11%** at risk**.** Brazilian **mango** MRLs have **13%** at risk, **guava** and **soybeans 7%** at risk each and **4%** of **coffee** EU MRLs are at risk of being removed.

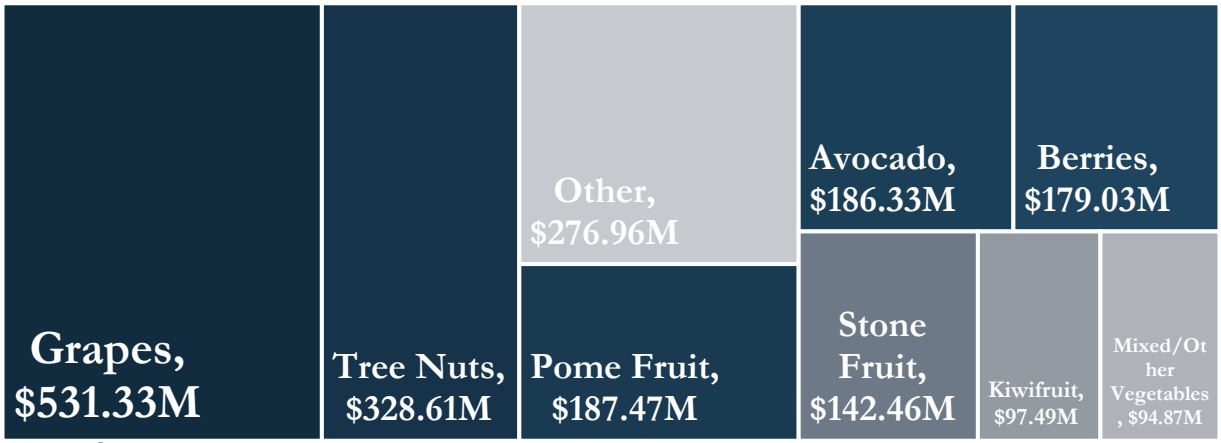
Multiple substances impact **over 20 plus commodities each**. The fungicide difenoconazole has the largest impact affecting 41 commodities and tebuconazole (33 commodities). The herbicide glufosinate impacts 32 commodities and the insecticide alpha-cypermethrin 29 commodities.

Active Substance	Commodities Impacted (#)
Difenoconazole	41
Tebuconazole	33
Glufosinate	32
Alpha-Cypermethrin	29
Mancozeb	28
Bifenthrin	26
Fludioxonil	25
Cyprodinil	22
Beta-Cypermethrin	21
Imidacloprid	15
Sulfoxaflor	15
Acibenzolar-S-methyl	14
Spirodiclofen	14
Cyproconazole	13
Dimethomorph	11
Metiram	11
Fenoxaprop-P	10
Lufenuron	10
Beta-Cyfluthrin	9
Malathion	9
Tetraconazole	9
Diquat	8
Prothioconazole	7
Metconazole	6
Flubendiamide	5
Isopyrazam	5
Myclobutanil	4
Benalaxyl	3
Benthiavalicarb	3
Cyfluthrin	3
Esfenvalerate	2
Famoxadone	2
Dimoxystrobin	1
Metribuzin	1
Pendimethalin	1
Propargite	1

Chile

Trade Value Exposed	Dependency Tier	Value at Risk
$2.02B	**Moderate**	**$1.83B**
2022-2024 avg, USD	13.7% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 12 other commodities detailed below.

Trade Narrative

Unlike some of its neighbors, Chile boasts a relatively diverse trade flow to the European Union (EU). According to the EU's HS-8 data, the top category, Grapes, is largely (65%) made up of various wines, while fresh and dried grapes make up 33% and the remaining marginal percentage is primarily composed of grape juice. The Tree Nuts category is, meanwhile, comprised mainly of walnuts (53%) and hazelnuts/filberts (42%). Similarly, Pome Fruit is primarily made up of apples (62%) and pears (35%). The Berries category, however, is dominated by fresh highbush blueberries (68%).

While notable in absolute dollar terms for making up 7% of the top 20 categories bound for the EU by value, the Stone Fruit category only merits a 'low' dependency label due to Chile's exports to the rest of the world. That said, it is worth noting that the category is comprised mainly (70%) of prunes with the remainder being split between peaches/nectarines (10%), sweet cherries (12%), and other marginal stone fruits (~8%).

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Grapes	$531.33M	Moderate
2	Tree Nuts	$328.61M	Critical
3	Pome Fruit	$187.47M	High
4	Avocado	$186.33M	Critical
5	Berries	$179.03M	High
6	Stone Fruit	$142.46M	Low
7	Kiwifruit	$97.49M	Critical
8	Mixed/Other Vegetables	$94.87M	High
9	Sunflower Seed	$47.33M	Critical
10	Mixed Fruit & Nuts	$47.21M	Moderate
11	Maize/Corn	$40.85M	Critical
12	Other Vegetable Extracts	$34.72M	Critical
13	Tomatoes	$33.4M	Moderate
14	Seaweed & Algae	$23.48M	Moderate
15	Alliums	$14.02M	High
16	Melon Seed	$12.12M	Critical
17	Legumes & Pulses	$6.65M	Critical
18	Citrus	$6.1M	Low
19	Alfalfa & Forage	$5.64M	Critical
20	Other Tropical/Exotic Fruit	$5.43M	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Chile maintains a national MRL list. Where no Chilean MRL exists, first Codex, then European Union, and then United States MRLs apply. Where no MRLs exist in any of these market standards, Chile's default MRL of 0.01 ppm applies.

Of the 63 active substances on the EU list, **29** have at least one established Chilean MRL. Based on the trade data analysis, this assessment reviewed these **29** substances across more than 85 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were 74 commodities with at least one established Chilean and EU MRLs. Of these, **45 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Chilean producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Chilean MRLs established for **wine grapes 17%** and **table grapes 14%** are at risk of elimination if the policy is implemented. Similarly, Chilean **pears** and **apples** each face a potential risk of losing **14%** of their established EU MRLs. While **tree nuts,** such as **hazelnuts** and **walnuts** risk losing **9%** and **6%** respectively, of their MRLs. Although stone fruits are less dependent on EU trade, **peach** (nectarines), **sweet cherry**, and **plums (prunes)** are at risk of losing **14%**, **13%**, and **11%,** of their MRLs respectively.

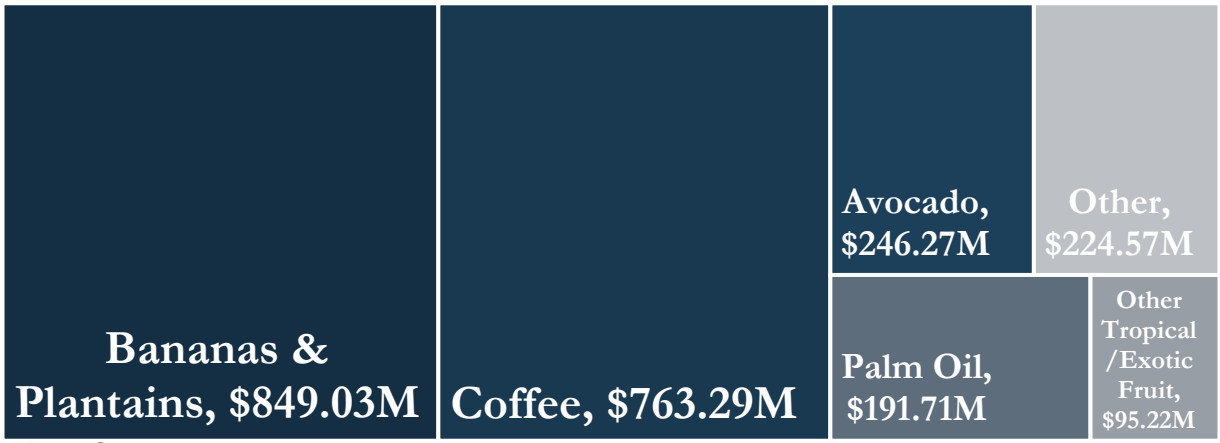
There were multiple substances that impact **over 20 plus commodities each**. In particular the herbicide glufosinate has the largest impact, affecting 44 commodities, followed by insecticide bifenthrin (32 commodities) and fungicide fludioxonil (31 commodities).

Active Substance	Commodities Impacted (#)
Glufosinate	44
Bifenthrin	32
Fludioxonil	31
Cyprodinil	29
Difenoconazole	28
Maneb	27
Metiram	27
Spirodiclofen	27
Mancozeb	26
Tebuconazole	24
Imidacloprid	17
Myclobutanil	17
Sulfoxaflor	17
Diquat	8
Esfenvalerate	7
Fenbuconazole	7
Lufenuron	6
Isopyrazam	5
Malathion	5
Dimethomorph	4
Pendimethalin	4
Benalaxyl	3
Cyfluthrin	3
Flubendiamide	2
Quinoxyfen	2
Acibenzolar-S-methyl (benzothiadiazole)	1
Cyproconazole	1
Dicloran	1
Propargite	1

Colombia

Trade Value Exposed	Dependency Tier	Value at Risk
$2.37B	**High**	**$1.97B**
2022-2024 avg, USD	29.0% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 15 other commodities detailed below.

Trade Narrative

Colombia's exports to the European Union (EU) are dominated by Bananas/Plantains and Coffee, which make up a combined 67% of value within the top 20 commodities that Colombia exports to the EU. Detailed HS-8 data reveals that the Bananas/Plantains category is almost entirely made up of bananas. The Coffee category, meanwhile, is roughly a 95/5 split between green coffee and coffee extracts and concentrates.

In looking at trade dependency on the EU, the Bananas/Plantains (50%), Avocados (60%), Palm Oil (36%), and Other Tropical/Exotic Fruit (65%) categories are notable for their 'critical' dependency on the EU as a market for their given export. The Other Tropical/Exotic Fruit category is, unfortunately, difficult to pick apart from a trade data perspective, as it is treated as a miscellaneous and 'not elsewhere stated' category. Based on production trends, however, it is likely to contain gulupa (passion fruit) and goldenberries.

Since Colombia accepts Codex MRLs, the top 99% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa, palm oil and fruit, they were excluded from this calculation because the Codex proxy method cannot assess them, with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Bananas & Plantains	$849.03M	Critical
2	Coffee	$763.29M	High
3	Avocado	$246.27M	Critical
4	Palm Oil	$191.71M	Critical
5	Other Tropical/Exotic Fruit	$95.22M	Critical
6	Cane/Beet Sugar	$76.78M	High
7	Palm Nuts & Kernels	$45.58M	Critical
8	Mixed Fruit & Nuts	$39.42M	High
9	Citrus	$32.15M	High
10	Cocoa	$18.03M	High
11	Mango, Guava & Mangosteen	$3.92M	High
12	Other Oilseeds	$2.83M	Critical
13	Maize/Corn	$1.38M	Low
14	Pineapple	$895,275	High
15	Potatoes	$746,525	Moderate
16	Other Vegetable Extracts	$727,868	High
17	Mixed/Other Vegetables	$608,115	Low
18	Barley	$559,404	Low
19	Papaya	$553,122	Critical
20	Legumes & Pulses	$391,148	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Colombia does not maintain a national MRL list, instead defers fully to Codex. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 99% of Colombia's commodity exports to the EU. Of the active substances and commodities reviewed, **5** have corresponding Codex and EU MRLs for **avocado, 10** for **banana**, **5** for **green coffee bean, 11 for sugar beet, 15 for lime, 9 for mango, 2 for sugar cane** and **none** for **cocoa**, **palm fruit or palm nuts.** Because Colombia relies entirely on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for avocado, banana, and green coffee bean.

Active substances with avocado Codex and EU MRLs

Active Substance	Pesticide Type
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Spirodiclofen	Insecticide

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

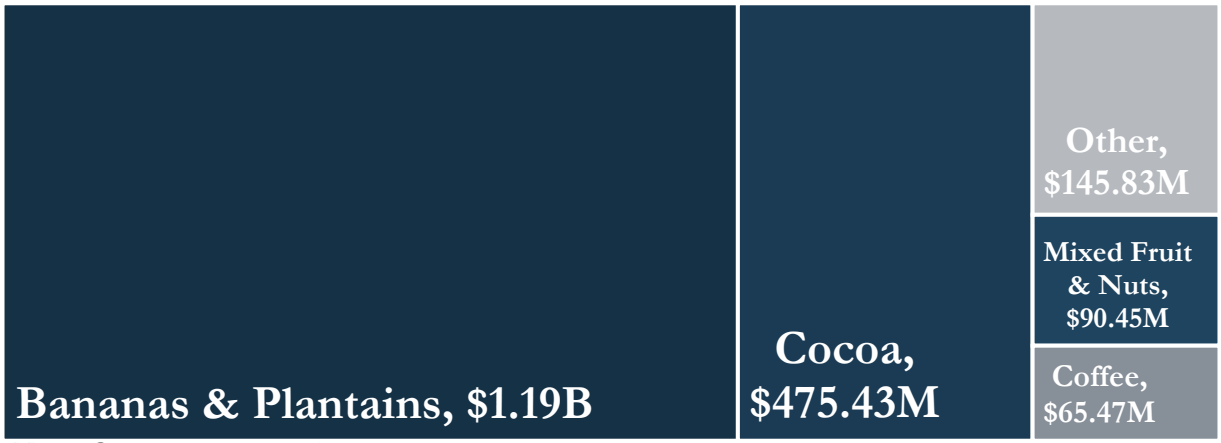
Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

Ecuador

Trade Value Exposed	Dependency Tier	Value at Risk
$1.96B	**High**	**$1.26B**
2022-2024 avg, USD	29.1% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 16 other commodities detailed below.

Trade Narrative

The Bananas/Plantains (60.4%) and Cocoa (24%) categories dominate Ecuador's top 20 export categories to the European Union (EU). EU HS-8 data reveals that the Bananas/Plantains category is largely (97%, $1.1B) comprised of fresh bananas, while the cocoa category is 97% composed of raw cocoa. The same data shows that the Coffee category is also similarly made up of its raw form, green coffee.

The Mixed Fruits & Nuts category, while meriting a 'critical' dependency label and ranking as the third largest export category, cannot be parsed with the available level of detail in the trade data. That said, the fifth largest category, Pineapple, is worth highlighting for its 'critical' rating with 53% of Ecuador's pineapple bound for the EU. EU import data shows that the Pineapple category is 99% composed of fresh/dried pineapple rather than its processed derivatives, such as juice.

Since Ecuador accepts Codex MRLs, the top 99% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa, palm oil and fruit, they were excluded from this calculation because the Codex proxy method cannot assess them, with risk to these exports could not be estimated.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Bananas & Plantains	$1.19B	Critical
2	Cocoa	$475.43M	Critical
3	Mixed Fruit & Nuts	$90.45M	Critical
4	Coffee	$65.47M	Critical
5	Pineapple	$37.69M	Critical
6	Mixed/Other Vegetables	$30.75M	Moderate
7	Palm Hearts	$25.16M	Critical
8	Palm Oil	$19.48M	High
9	Other Tropical/Exotic Fruit	$16.64M	Moderate
10	Cane/Beet Sugar	$2.95M	High
11	Tropical Roots & Tubers	$2.94M	Low
12	Avocado	$2.69M	Critical
13	Mango, Guava & Mangosteen	$1.37M	Low
14	Tree Nuts	$1.21M	Critical
15	Grapes	$1.1M	Critical
16	Asparagus	$919,317	High
17	Legumes & Pulses	$899,909	Low
18	Capsicum/Chili (Spice)	$889,241	High
19	Pepper (Piper)	$642,101	High
20	Berries	$492,041	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Ecuador does not maintain a national MRL list, instead defers to Codex first then the EU followed by the U.S. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 99% of Ecuador's commodity exports to the EU. Of the active substances and commodities reviewed, **10** have corresponding Codex and EU MRLs for **banana**, **5** for **avocado**, **5** for **green coffee bean**, **3** for **cassava root**, and **none** for **cocoa/cacao bean**, **palm fruit,** or **palm nuts (palm oil kernels)**. Because Ecuador relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for banana.

Active substances with banana Codex and EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl (benzothiadiazole)	Fungicide
Bifenthrin	Insecticide
Difenoconazole	Fungicide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Mancozeb	Fungicide
Maneb	Fungicide
Metiram	Fungicide
Tebuconazole	Fungicide

Guyana

Trade Value Exposed	Dependency Tier	Value at Risk
$75M	**Critical**	**$72M**
2022-2024 avg, USD	42.7% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 19 other commodities detailed below and is equivalent to ~$3M.

Trade Narrative

Rice accounts for 95% of Guyana's top 20 export categories bound for the European Union (EU). The only other category worthy of note is Palm Hearts, which accounts for roughly 3% of value and based on EU HS-8 data, is purely preserved/prepared palm hearts.

The EU dependency analysis for Guyana is less reliable than for other countries, as a good portion of Guyana trade is with Caribbean nations, which can report inconsistently to UN Comtrade. This creates gaps in the data that can inflate dependency metrics: in some cases, the EU is the only partner that reported importing a given category from Guyana, not because it is dominant, but because other trade partners simply did not report theirs.

Rice represents Guyana's primary point of exposure to changing EU MRL policy now and in the future. Based on its overall 'critical' exposure, it would be expected most of its trade value exposed would be at risk. Since Guyana accepts Codex MRLs, the top 99% of commodity exports were considered to calculate a value-at-risk, which indicated that rice trade to the EU would be strongly impacted.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Rice	$72.05M	Critical
2	Palm Hearts	$2.85M	Critical
3	Sesame Seed	$151,264	Critical
4	Cane/Beet Sugar	$25,609	Low
5	Coriander & Cumin Seeds	$14,439	Critical
6	Coffee	$1,141	Low
7	Barley	$1,128	Low
8	Mixed/Other Vegetables	$685	Low
9	Mixed Fruit & Nuts	$313	Low
10	Tea	$302	Low
11	Grapes	$236	Low
12	Other Vegetable Extracts	$183	Low
13	Other Cereals	$182	Low
14	Legumes & Pulses	$106	Low
15	Olive Oil	$40	Low
16	Other Spices	$38	Low
17	Citrus	$35	Low
18	Mixed Spices	$28	Low
19	Tree Nuts	$27	Low
20	Wheat	$26	Low

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Guyana maintains its own MRL setting framework under the Pesticides and Toxic Chemicals Control Act 2000 (Cap. 68:09) and its 2004 Regulations, Part IX (ss. 220-230). Administered by the Pesticide and Toxic Chemicals Control Board (PTCCB), which is also Guyana's National Codex Contact Point. Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45 active substances** have at least one Codex MRL established. Since **rice** accounts for the top 99% of Guyana's commodity exports to the EU, rice MRLs for Guyana were reviewed. Of those 45 active substances, **6** have corresponding Codex and EU **MRLs** for **rice**.

According to Guyana's Ministry of Agriculture rice farmers are advised to adhere to EU MRLs. Because of this, the 63 EU active substances were reviewed for EU rice MRLs. Of these, **9 active substances** have EU **rice** MRLs above default and LOQ, meaning these MRLs are at risk of being eliminated under the proposed policy change. Below are a few of the active substances that might be impacted for rice.

Active substances with rice Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide
Difenoconazole	Fungicide
Flubendiamide	Insecticide
Glufosinate	Herbicide
Tebuconazole	Fungicide

Active substances with rice EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide
Beta-cypermethrin	Insecticide
Cyproconazole	Fungicide
Difenoconazole	Fungicide
Fenoxaprop-P-ethyl	Herbicide
Flubendiamide	Insecticide
Glufosinate-ammonium	Herbicide
Malathion	Insecticide
Tebuconazole	Fungicide

Paraguay

Trade Value Exposed	Dependency Tier	Value at Risk
$283M	**Moderate**	**$231M**
2022-2024 avg, USD	5.4% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 17 other commodities detailed below.

Trade Narrative

Soybeans dominate Paraguay's trade flow with the European Union (EU), accounting for approximately 70% of its top 20 categories. According to the EU's HS-8 data, this category is almost entirely (99%, $199M) comprised of soybean oilcake ultimately destined for use in animal feed. Unfortunately, the same data does not allow for enough granularity to determine the composition of Paraguay's second largest category, Other Oilseeds.

While only the sixth largest export category to the EU, the Groundnuts/Peanuts category is worth highlighting for its 'critical' dependency on the EU as a reliable export market. Indeed, 32% of all of Paraguay's peanut exports are bound for the EU. EU import data reveals that this category is 94% comprised of in shell/shelled peanuts. Soybean oilcake, nested within the 'Soybeans' broad category, is notable here as well given its 'High' exposure level, with 27% bound for the EU.

Paraguay maintains a national MRL list, but among its top exports to the EU, domestic MRLs for in-scope substances were found only for sesame seed; for other commodities, Codex MRLs apply. The top 97% of commodity exports were considered to calculate a value-at-risk. Several commodities, including soybean, peanut, sugar beet, and sugar cane could potentially be impacted by the proposed EU policy.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Soybeans	$200.84M	Moderate
2	Other Oilseeds	$37.24M	High
3	Cane/Beet Sugar	$12.54M	High
4	Rice	$7.58M	Low
5	Sesame Seed	$5.81M	Moderate
6	Groundnuts/Peanuts	$4.82M	Critical
7	Citrus	$4.82M	Critical
8	Maize/Corn	$4.23M	Low
9	Maté	$2.43M	High
10	Tropical Roots & Tubers	$1.03M	Low
11	Mixed/Other Vegetables	$755,075	Critical
12	Mixed Fruit & Nuts	$270,189	Moderate
13	Tree Nuts	$239,505	Critical
14	Rapeseed/Canola	$161,343	Low
15	Persimmon	$125,058	Critical
16	Sunflower/Safflower Oil	$92,592	Low
17	Legumes & Pulses	$85,646	Low
18	Tea	$74,264	Low
19	Other Vegetable Extracts	$45,278	Critical
20	Barley	$33,514	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Paraguay maintains its own national MRL list then applies Codex in the absence of a domestic MRL. If neither a national or Codex MRL exists then Argentina, Brazil and U.S. MRLs may be referenced. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Trade data analysis identified only one commodity, **sesame seed**, with MRLs for in-scope active substances in Paraguay. For the two relevant active substances, insecticide beta-cyfluthrin and fungicide tebuconazole, the EU MRLs for **sesame seed** are already set at the LOQ.

Because Paraguay accepts Codex MRLs in the absence of a national MRL, **45 active substances** (out of the EU list of 63) that have at least one Codex and EU MRLs were reviewed. The review focused on the top 97% of Paraguay's commodity exports to the EU.

Of the active substances and commodities reviewed, **13** have corresponding Codex and EU MRLs for **soybeans**, **16** for **watermelon**, **11** for **sugar beet**, **7** for **corn**, **6** for **rice**, **4** for **peanut**, **3** for **cassava root**, and **2** for **sugar cane**.

In addition, the following commodities have critical EU dependency: soybeans, peanuts, citrus (grapefruit and sweet orange), tree nuts (cashew nut and macadamia nut), and persimmon. The table below shows the number of Codex MRLs established for each commodity, the number of corresponding EU MRLs still in effect, and the number already established at the LOQ. In every case the Codex total equals the EU MRLs in effect plus the EU MRLs at the LOQ.

Commodity	# of Codex MRLs	# of EU MRLs in effect	# of EU MRLs at LOQ	Share of Codex MRLs at LOQ in the EU
Grapefruit	21	16	5	24%
Cashew nut	20	9	11	55%
Macadamia nut	19	8	11	58%
Orange, sweet	26	22	4	15%
Peanut	16	4	12	75%
Persimmon	20	11	9	45%
Soybean	28	13	15	54%

Peanuts show the highest share of Codex MRLs that the EU has already set at the LOQ (12 of 16, or 75%), followed by macadamia nut (58%), cashew nut (55%) and soybean (54%). Sweet orange has the lowest share (15%) and the most EU MRLs still in effect (22), followed by grapefruit (16) and soybean (13). Peanuts have only four EU MRLs still in effect, which is the smallest number. Even so, peanuts carry the 'critical' dependency because 32% of Paraguay's peanut exports go to the EU.

Registration Review:

For a more in-depth review in this assessment, Paraguay shared a list of priority registrations in the country that includes 26 pesticide-crop combinations. The table below shows how the EU treats them.

EU MRL status of the pesticide-crop combination	Number	Share of 26
EU MRLs already established at the default level or the LOQ	18	69%
EU MRLs in effect	6	23%
EU MRLs scheduled to be restricted to LOQ on 29 January 2027	2	8%
Total	**26**	**100%**

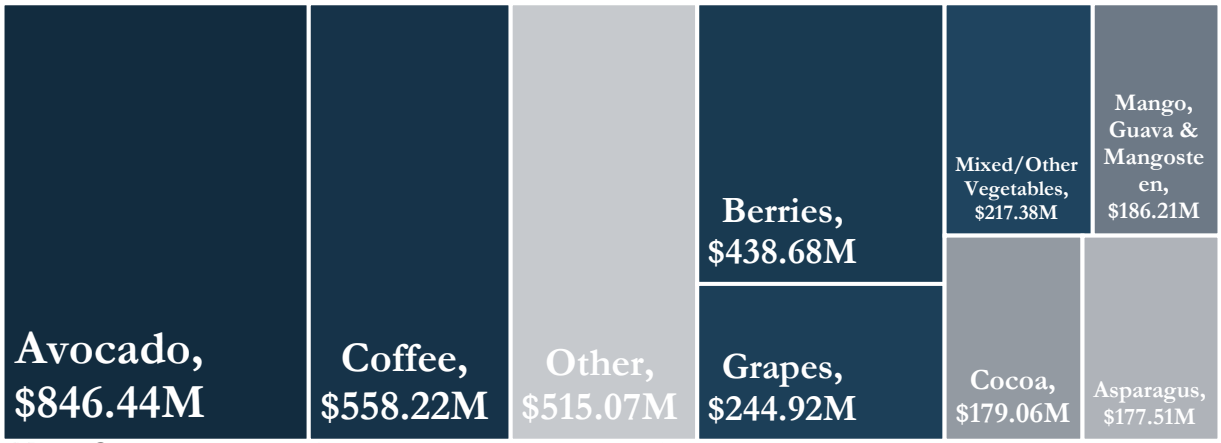
For 18 of the 26 combinations (69%), together with the two combinations whose restriction is already scheduled for January 2027, the EU MRL is already at the default level or the LOQ, so a further reduction is not expected to restrict trade. However, import MRL requests may not be possible for these substances under the proposed EU policy to restrict MRLs based on third country uses. For the purposes of this assessment, the practical exposure from the proposed change sits in the six combinations with EU MRLs in effect. The priority registrations cover 10 commodities: barley, chia, corn, oat, peanut, rice, soy, sugar cane, tomato, and wheat.

Finally, for the 26 pesticide-crop combinations, the EU's Rapid Alert System for Food and Feed (RASFF) recorded one notification for rice from Paraguay over the past five years (September 30, 2021 – September 30, 2026) with residues of carbendazim. This low number of notifications, however, should not be read as evidence that EU MRLs have little impact. It reflects the significant effort and cost growers absorb to comply with EU standards.

Peru

Trade Value Exposed	Dependency Tier	Value at Risk
$3.36B	**High**	**$2.84B**
2022-2024 avg, USD	28.6% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 12 other commodities detailed below.

Trade Narrative

Peru boasts a relatively diverse set of top 20 commodity categories bound for the European Union (EU). The Avocado and Coffee categories collectively account for approximately 41% of value in the top 20 categories. As with many South American exporters, Peru's Coffee category is made up entirely of green coffee, according to the EU's HS-8 data. Said data also illuminates the Berries category, which is largely (96%, $421M) composed of highbush blueberries. Indeed, Peru is the largest highbush blueberry exporters in the world.

In looking at dependency on the EU as a reliable export outlet, Avocados (48%), Coffee (47%), Mango/Guava/Mangosteens (40%), and Cocoa (30%) are all notable for meriting a 'critical' dependency label. Unfortunately, the nature of trade data precludes drilling in on the Mango/Guava/Mangosteens to get a specific breakdown, but production trends suggest that it is largely comprised of mangos rather than guava. Additionally, while only a 'moderate' dependency, it is worth highlighting that the Grapes category is almost entirely (99%, $244M) comprised of fresh table grapes.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Avocado	$846.44M	Critical
2	Coffee	$558.22M	Critical
3	Berries	$438.68M	High
4	Grapes	$244.92M	Moderate
5	Mixed/Other Vegetables	$217.38M	High
6	Mango, Guava & Mangosteen	$186.21M	Critical
7	Cocoa	$179.06M	Critical
8	Asparagus	$177.51M	High
9	Mixed Fruit & Nuts	$135.85M	Critical
10	Bananas & Plantains	$72.25M	Critical
11	Citrus	$71.18M	High
12	Other Tropical/Exotic Fruit	$56.81M	Critical
13	Ginger	$42.61M	Critical
14	Alliums	$31.6M	High
15	Other Cereals	$23.9M	High
16	Legumes & Pulses	$18.9M	Moderate
17	Melon Seed	$16.61M	High
18	Other Vegetable Extracts	$16.03M	Critical
19	Maize/Corn	$14.82M	Critical
20	Palm Oil	$14.53M	Moderate

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Peru maintains a national MRL list and defers to Codex in the absence of an established national MRL. When there is no established Codex MRL, U.S. MRL values are accepted. If there is no U.S. MRL, the EU MRL value is accepted.

Of the 63 active substances on the EU list, **26** have at least one established Peruvian MRL. Based on the trade data analysis, this assessment reviewed these **26** substances across 90 commodities to evaluate the level of risk to a specific active substance/commodity combination that could be impacted by the proposed EU policy changes.

There were 27 commodities with at least one established Peruvian and EU MRLs. Of these, **nearly 20 commodities could lose at least 10% of their MRLs should the current proposal be implemented**. This suggests that Peruvian producers could face a reduced set of available active substances for managing production risks, placing a challenge on market access in the EU.

Of the Peruvian MRLs established for **highbush blueberry**, **23%** are at risk of being eliminated if the policy is implemented. For Peruvian grapes, **15%** of **wine grapes** and **14%** of **table grape** MRLs are in danger of being deleted. Similarly, **13%** of **coffee, 10%** of **mango,** and **2%** of **avocado** MRLs each face a potential risk of their EU MRLs being eliminated.

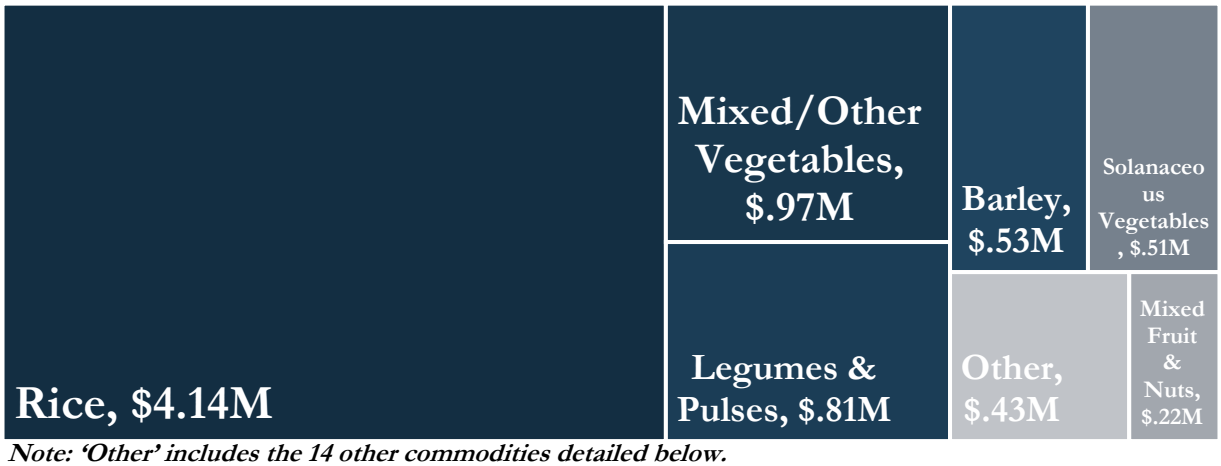
There were several substances that impact **over 10 plus commodities each**. Fungicides tebuconazole has the largest impact, affecting 16 commodities, followed by difenoconazole (15 commodities), mancozeb (15 commodities), and insecticides alpha-cypermethrin (12 commodities) and imidacloprid (11 commodities).

Active Substance	Commodities Impacted (#)
Tebuconazole	16
Difenoconazole	15
Mancozeb	15
Alpha-Cypermethrin (aka alphamethrin)	12
Imidacloprid	11
Cyproconazole	8
Myclobutanil	7
Glufosinate	6
Clofentezine	5
Fenoxaprop-P	5
Malathion	5
Metiram	4
Spirodiclofen	4
Dimethomorph	3
Flubendiamide	3
Lufenuron	3
Sulfoxaflor	3
Fenazaquin	2
Quinoxyfen	2
Benalaxyl	1
Beta-Cyfluthrin	1
Bifenthrin	1
Cyfluthrin	1
Cyprodinil	1
Fludioxonil	1
Pendimethalin	1

Suriname

Trade Value Exposed	Dependency Tier	Value at Risk
$7.6M	**High**	**$7.6M**
2022-2024 avg, USD	23.6% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 14 other commodities detailed below.

Trade Narrative

Suriname's exports to the European Union (EU) are relatively modest. Rice dominates the trade flow, accounting for 54.4% of value of the top 20 commodity categories. EU HS-8 data reveals that these rice flows are largely long grain and typically milled rice. Said data similarly reveals that the Legumes & Pulses category is primarily (99%, $799K) fresh green beans.

Similar to Guyana, the EU dependency analysis for Suriname is less reliable than for other countries, as a good portion of Suriname's trade is with Caribbean nations, which can report inconsistently to UN Comtrade. This creates gaps in the data that can inflate dependency metrics: in some cases, the EU is the only partner that reported importing a given category from Suriname, not because it is dominant, but because other trade partners simply did not report theirs.

As will be discussed in the MRL Insight section, Suriname does not maintain a list of domestic MRLs and instead defers to the EU. Based on this, we expect that value exposed would be equivalent to value at risk.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Rice	$4.14M	High
2	Mixed/Other Vegetables	$968,663	Critical
3	Legumes & Pulses	$807,329	Critical
4	Barley	$527,947	Critical
5	Solanaceous Vegetables	$505,467	Critical
6	Mixed Fruit & Nuts	$218,002	Critical
7	Tropical Roots & Tubers	$125,389	Critical
8	Other Cereals	$75,152	Critical
9	Mixed Spices	$48,996	Critical
10	Groundnuts/Peanuts	$41,897	Critical
11	Wheat	$38,950	High
12	Other Spices	$27,206	Critical
13	Potatoes	$17,889	Critical
14	Cucurbits	$14,114	Critical
15	Other Tropical/Exotic Fruit	$10,955	High
16	Other Oilseeds	$8,825	Critical
17	Mango, Guava & Mangosteen	$6,923	Moderate
18	Tea	$5,681	Low
19	Copra/Coconut	$5,483	Critical
20	Coconut	$3,914	High

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Suriname does not maintain a national MRL list, instead defers to the European Union. Therefore, EU MRLs were used to assess potential impact on specific commodities.

The list of 63 EU active substances was reviewed for the top 98% of Suriname's commodity exports to the EU. There are **24** EU MRLs for **barley**, **27** for **eggplant**,**9** for **rice**, **25** for **wheat**, **24** for **bell pepper**, **7** for **artichoke**, **6** for **cassava root**, and **5** for **peanut** that are at risk of being eliminated under the proposed policy change. Below are a few of the active substances that might be impacted for barley, eggplant, and rice.

Active substances with barley EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl	Fungicide
Alpha-Cypermethrin	Insecticide
Beta-cyfluthrin	Insecticide
Beta-cypermethrin	Insecticide
Carbaryl	Insecticide
Cyfluthrin	Insecticide
Cyproconazole	Fungicide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Esfenvalerate	Insecticide
Famoxadone	Fungicide
Fenoxaprop-P-ethyl	Herbicide
Flufenacet	Herbicide
Isopyrazam	Fungicide
Malathion	Insecticide
Mancozeb	Fungicide
Maneb	Fungicide
Metconazole	Fungicide
Metiram	Fungicide
Proquinazid	Fungicide
Prothioconazole	Fungicide
Quinoxyfen	Fungicide
Sulfoxaflor	Insecticide
Tebuconazole	Fungicide

Active substances with eggplant EU MRLs

Active Substance	Pesticide Type
Acibenzolar-S-methyl	Fungicide
Alpha-Cypermethrin	Insecticide
Benalaxyl	Fungicide

Active Substance	Pesticide Type
Beta-cyfluthrin	Insecticide
Beta-cypermethrin	Insecticide
Bifenthrin	Insecticide
Cyfluthrin	Insecticide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Dimethomorph	Fungicide
Esfenvalerate	Insecticide
Fenazaquin	Insecticide
Fenoxaprop-P-ethyl	Herbicide
Fludioxonil	Fungicide
Glufosinate-ammonium	Herbicide
Imidacloprid	Insecticide
Isopyrazam	Fungicide
Lufenuron	Insecticide
Mancozeb	Fungicide
Maneb	Fungicide
Mepanipyrim	Fungicide
Metiram	Fungicide
Myclobutanil	Fungicide
Proquinazid	Fungicide
Sulfoxaflor	Insecticide
Tebuconazole	Fungicide
Tetraconazole	Fungicide

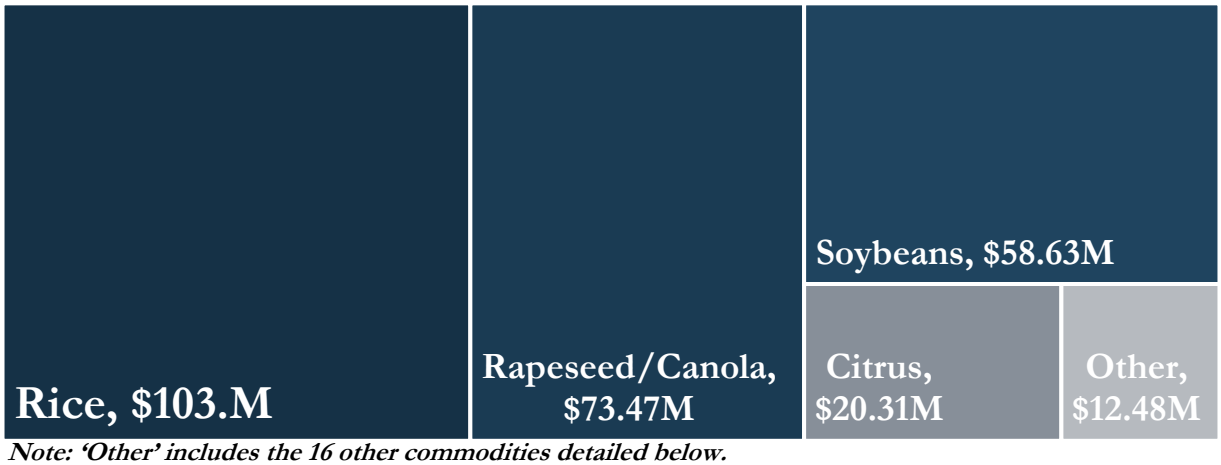
Active substances with rice EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin	Insecticide
Beta-cypermethrin	Insecticide
Cyproconazole	Fungicide
Difenoconazole	Fungicide
Fenoxaprop-P-ethyl	Herbicide
Flubendiamide	Insecticide
Glufosinate-ammonium	Herbicide
Malathion	Insecticide
Tebuconazole	Fungicide

Uruguay

Trade Value Exposed	Dependency Tier	Value at Risk
$267M	**Moderate**	**$247M**
2022-2024 avg, USD	12.4% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 16 other commodities detailed below.

Trade Narrative

The Rice, Rapeseed/Canola, and Soybeans categories account for approximately 89% of the top 20 export categories bound for the European Union (EU). The EU's HS-8 data reveals that the Rapeseed/Canola category is dominated (94%, $69M) by low erucic acid canola meant for food use. Additionally, said data also shows that the Soybeans category is largely (90%, $53M) comprised of whole soybeans rather than their processed counterparts.

While not a 'critical' dependency, the Citrus category is worth highlighting for being Uruguay's fourth largest export category to the EU. The category itself is somewhat diverse with fresh oranges accounting for 55% ($11M), lemons 31% ($6M), and the rest composed of a mix of various citrus such as clementines and wilkings.

Since Uruguay accepts Codex MRLs, the top 96% of commodity exports were considered to calculate a value-at-risk. Specifically, rice, rapeseed and soybeans would be expected to be impacted the most from the proposed EU policy change.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Rice	$103.M	High
2	Rapeseed/Canola	$73.47M	Critical
3	Soybeans	$58.63M	Low
4	Citrus	$20.31M	High
5	Alfalfa & Forage	$2.54M	High
6	Grapes	$1.88M	Moderate
7	Other Oilseeds	$1.63M	Critical
8	Mustard Seed	$1.45M	Critical
9	Pome Fruit	$1.32M	Critical
10	Oats	$1.09M	Critical
11	Maté	$624,242	Critical
12	Groundnuts/Peanuts	$612,901	Critical
13	Berries	$584,349	Critical
14	Cucurbits	$240,806	Critical
15	Potatoes	$151,542	Critical
16	Maize/Corn	$86,157	Low
17	Persimmon	$79,636	Critical
18	Other Cereals	$74,621	Low
19	Cocoa	$71,763	Low
20	Pineapple	$50,888	Critical

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Uruguay defers to Codex. If there are no Codex MRLs, the regional requirements of Argentina, Brazil, and Chile, since agroecological production areas are similar, are adopted depending on the crop and active ingredient according to Resolution No 514/22. When there are no MRLs established in any of these markets, MRLs are established first according to the EU then the U.S. Authorities may deviate from these specifications for public health reasons. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 96% of Uruguay's commodity exports to the EU. Of the active substances and commodities reviewed, **15** have corresponding Codex and EU MRLs for **rape seed (canola)**, **6** for **rice**, **13** for **soybean**, **21** for **wine grape**, **21 for sweet orange**, and **15** for **lemon.** Because Uruguay relies on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for rapeseed, rice and soybean.

Active substances with rape seed (canola) Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cyfluthrin	Insecticide
Beta-Cypermethrin	Insecticide
Bifenthrin	Insecticide
Cyfluthrin	Insecticide
Cyproconazole	Fungicide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Diquat	Herbicide
Glufosinate	Herbicide
Isopyrazam	Fungicide
Metconazole	Fungicide
Prothioconazole	Fungicide
Sulfoxaflor	Insecticide
Tebuconazole	Fungicide

Active substances with rice Codex and EU MRLs

Active Substance	Pesticide Type
Alpha-Cypermethrin (aka alphamethrin)	Insecticide
Beta-Cypermethrin	Insecticide
Difenoconazole	Fungicide
Flubendiamide	Insecticide
Glufosinate	Herbicide
Tebuconazole	Fungicide

Active substances with soybean Codex and EU MRLs

Active Substance	Pesticide Type
Beta-Cyfluthrin	Insecticide
Bifenthrin	Insecticide
Cyfluthrin	Insecticide
Cyproconazole	Fungicide
Cyprodinil	Fungicide
Difenoconazole	Fungicide
Diquat	Herbicide
Flubendiamide	Insecticide
Fludioxonil	Fungicide
Glufosinate	Herbicide
Prothioconazole	Fungicide
Sulfoxaflor	Insecticide
Tebuconazole	Fungicide

Venezuela

Trade Value Exposed	Dependency Tier	Value at Risk
$21.1M	**High**	**$4.08M**
2022-2024 avg, USD	15.4% of exports by value are EU-bound	2022-2024 avg, USD

Trade Value Exposed by Top 20 Commodity Categories



Note: 'Other' includes the 18 other commodities detailed below.

Trade Narrative

Cocoa and Coffee collectively account for approximately 91% of Venezuela's top 20 commodity categories bound for the European Union (EU). As might be expected, the EU's HS-8 data reveals that these categories are dominated by raw cocoa (90%, $14M) and green coffee (99%, $3.7M) respectively. Both commodities also merited a 'High' dependency label with 25% of Venezuela's cocoa and 19% of its coffee bound for the EU. The remaining 18 categories are relatively minor, a hallmark of Venezuela's limited agricultural base.

Since Venezuela accepts Codex MRLs, the top 98% of commodity exports were considered to calculate a value-at-risk. As there are no corresponding EU and Codex MRLs for cocoa, it was excluded from this calculation because the Codex proxy method cannot assess it, so risk to these exports could not be estimated. Since Venezuela's primary export to the EU is cocoa, the value- at-risk for this market is much lower than its trade value exposed.

Detailed Top 20 Broad Agricultural Categories

#	Commodity Category	EU Trade Value	EU Dependency
1	Cocoa	$15.65M	High
2	Coffee	$3.76M	High
3	Legumes & Pulses	$987,756	Low
4	Sesame Seed	$317,431	Low
5	Citrus	$129,431	Critical
6	Mango, Guava & Mangosteen	$112,745	High
7	Tea	$48,493	Low
8	Tree Nuts	$46,817	Critical
9	Barley	$38,199	High
10	Tropical Roots & Tubers	$14,081	Critical
11	Mixed Fruit & Nuts	$9,179	Low
12	Papaya	$3,607	Critical
13	Maize/Corn	$2,572	Low
14	Stone Fruit	$1,615	Critical
15	Other Vegetable Extracts	$893	Low
16	Mixed/Other Vegetables	$803	Low
17	Tomatoes	$781	Critical
18	Cane/Beet Sugar	$578	Moderate
19	Grapes	$309	Low
20	Soybeans	$260	High

EU Dependency Tiers (% EU Bound): Critical = +30%, High= 15% - 30%, Moderate = 5% - 15%, & Low = <5%

MRL Insight

Venezuela defers to Codex and does not maintain a national MRL list. Therefore, Codex MRLs were used as a proxy to assess potential impact on specific commodities.

Of the 63 active substances on the EU list, **45** have at least one Codex MRL established. The review focused on the top 98% of Venezuela's commodity exports to the EU. Of the active substances and commodities reviewed, **5** have corresponding Codex and EU MRLs for **green coffee beans**, **21** for **sweet oranges**, **16** for **kidney beans**, and **9** for **mango**, and **none** for **cocoa/cacao bean.** Because Venezuela relies entirely on Codex, a country specific MRL assessment is limited. Below are a few of the active substances that might be impacted for green coffee bean.

Active substances with green coffee bean Codex and EU MRLs

Active Substance	Pesticide Type
Cyproconazole	Fungicide
Glufosinate	Herbicide
Imidacloprid	Insecticide
Lufenuron	Insecticide
Tebuconazole	Fungicide

RECOMMENDATIONS

This assessment examined how the proposed changes to the EU MRL policy under the Food and Feed Safety Simplification Package could affect exports from the Americas to the EU, with particular attention to the commodities and trading partners most exposed to, or dependent on, EU market access.

The EU's proposed restriction of pesticide MRLs to the limit of quantification (LOQ) for hazard-classified active substances would remove the import tolerances that currently let many Americas exporters use domestically authorized crop protection products while still meeting EU import standards. This assessment finds that the impact would fall unevenly across the hemisphere, concentrated less by overall trade volume and more by which commodities a country depends on and how domestically registered pesticides for those commodities compare to the EU's list.

Multiple countries in the Americas face high exposure to changes that could impact their European market access. The Caribbean and South America, as regions, have 27.5% and 16.9% respectively, of export value are EU-bound. Belize, Costa Rica, Honduras, and Panama each send over 30% of its export value to the EU. In addition, even countries with low or moderate overall exposure to the EU market can have specific commodities that are critically affected by changes to EU standards. This is especially true for products not widely grown in Europe, such as bananas and coffee, where the European market relies heavily on imports to access these commodities. Notable single-commodity MRL risk shares identified include U.S. cranberry (60% of established MRLs at risk), Peruvian highbush blueberry (23%), and Chilean wine and table grapes (17% and 14%).

Because this assessment was limited by the lack of country-level data on pesticide registration and usage, we recommend a further assessment to better understand the potential impact of the proposed EU MRL policy change. This follow-up should involve direct engagement with domestic commodity groups to identify the active substances growers use, and to assess potential impact based on residue data, availability of alternative products, and the overall cost of adaptation. For exported commodities specifically, impact is determined by actual pesticide use, detected residues, availability of alternative pesticide products, and alternative markets.

Exporters should also track the EU-UK Sanitary and Phytosanitary (SPS) negotiations currently underway. If finalized, this agreement would have the UK realign its pesticide and MRL policy with the EU's, which means that any MRL restrictions adopted would extend not just to the EU but to the UK market as well. A revision of this analysis once negotiating terms are confirmed is recommended, to quantify how much UK realignment would add to the EU exposure already identified here.

Finally, it is important to note that EU MRL violation data is not a reliable source to calculate impact on exporters to the EU as exporters tend to adapt their production practices prior to exports to ensure compliance with export markets' standards. The lack of residue detects in one commodity may not extend to commodity in other markets that may have different growing conditions and pest pressures. The cost of adaptation to comply with restrictive MRLs is outside the scope of this analysis.

APPENDIX A – CROPLIFE AMERICA ACTIVE SUBSTANCE LIST[7]

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
1	**1,2-Dibromoethane**	Fumigant	Not approved	LOQ
1	**1,2-Dichloropropane**	Fumigant	Not approved	LOQ
1	**2-Methoxypropan-1-ol**	Solvent	Not approved	DEFAULT
3	**Acetochlor**	Herbicide	Not approved	YES
3	**Acibenzolar-S-methyl (benzothiadiazole)**	Fungicide	Not approved	YES
3	**Alpha-Cypermethrin (aka alphamethrin)**	Insecticide	Not approved	YES
3	**Amitrole (aminotriazole)**	Herbicide	Not approved	LOQ
1	**Anthracene oil**	Insecticide	Not approved	DEFAULT
1	**Anthraquinone**	Fungicide	Not approved	LOQ
2	**Asulam**	Herbicide	Not approved	LOQ
1	**Azafenidin**	Herbicide	Not approved	DEFAULT
3	**Benalaxyl**	Fungicide	Not approved	YES
3	**Benfluralin**	Herbicide	Not approved	YES
1	**Benomyl**	Fungicide	Not approved	LOQ
2	**Benthiavalicarb**	Fungicide	Not approved	YES
3	**Beta-Cyfluthrin**	Insecticide	Not approved	YES
3	**Beta-Cypermethrin**	Insecticide	Not approved	YES
3	**Bifenazate**	Insecticide	Approved	LOQ
3	**Bifenthrin**	Insecticide	Not approved	YES
1	**Binapacryl**	Fungicide	Not approved	LOQ
1	**Bis(tributyltin) oxide**	Biocide/ Fungicide	Not approved	DEFAULT

[7] Legend: Category- classification according to CLA- Category 1- meets ECHA cut-off classifications; Category 2- possible endocrine disruptors*; Category 3- other concerns; * - CLA did not classify

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
3	**Bitertanol**	Fungicide	Not approved	LOQ
1	**Boric acid**	Insecticide	Not approved	DEFAULT
1	**Brodifacoum**	Rodenticide	Not approved	DEFAULT
1	**Bromadiolone**	Rodenticide	Not approved	LOQ
3	**Bromoxynil**	Herbicide	Not approved	LOQ
2	**Buprofezin**	Insecticide	Approved	LOQ
1	**Captafol**	Fungicide	Not approved	LOQ
3	**Carbaryl**	Insecticide	Not approved	YES
1	**Carbendazim**	Fungicide	Not approved	LOQ
1	**Carbetamide**	Herbicide	Not approved	LOQ
1	**Carbon monoxide**	Fumigant	Not approved	LOQ
3	**Carboxin**	Fungicide	Not approved	LOQ
1	**Chlorophacinone**	Rodenticide	Not approved	DEFAULT
3	**Chlorothalonil**	Fungicide	Not approved	LOQ
3	**Chlorpropham**	Herbicide	Not approved	YES
3	**Chlorpyrifos**	Insecticide	Not approved	LOQ
3	**Chlorpyrifos-methyl**	Insecticide	Not approved	LOQ
2	**Clofentezine**	Insecticide	Not approved	YES
3	**Clothianidin**	Insecticide	Not approved	LOQ
1	**Coumatetralyl**	Rodenticide	Not approved	DEFAULT
2	**Cyanamide (H & Ca cyanamide)**	Herbicide/ Plant Growth Regulator	Not approved	LOQ
3	**Cyfluthrin**	Insecticide	Not approved	YES
1	**Cyproconazole**	Fungicide	Not approved	YES
2	**Cyprodinil**	Fungicide	Approved	YES

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
3	**Dicloran**	Fungicide	Not approved	YES
1	**Difenacoum**	Rodenticide	Not approved	YES
3	**Difenoconazole**	Fungicide	Approved	YES
1	**Difethialone**	Rodenticide	Not approved	DEFAULT
3	**Diflubenzuron**	Insecticide	Not approved	LOQ
3	**Dimethoate**	Insecticide	Not approved	LOQ
1	**Dimethomorph**	Fungicide	Not approved	YES
3	**Dimoxystrobin**	Fungicide	Not approved	YES
1	**Dinocap**	Fungicide	Not approved	YES
1	**Dinoseb, its acetate and salts**	Herbicide	Not approved	LOQ
1	**Dinoterb**	Herbicide	Not approved	LOQ
3	**Diphenylamine**	Plant Growth Regulator	Not approved	LOQ
3	**Diquat**	Herbicide	Not approved	YES
1	**Diuron**	Herbicide	Not approved	LOQ
1	**Epoxiconazole**	Fungicide	Not approved	LOQ
3	**Esfenvalerate**	Insecticide	Approved	YES
1	**Etacelasil**	Plant Growth Regulator	Not approved	DEFAULT
2	**Ethiprole**	Insecticide	Not approved	DEFAULT
3	**Ethoprophos**	Insecticide	Not approved	LOQ
3	**Ethoxyquin**	Fungicide	Not approved	LOQ
1	**Ethylene oxide**	Fumigant	Not approved	LOQ
3	**Famoxadone**	Fungicide	Not approved	YES
3	**Fenamidone**	Fungicide	Not approved	LOQ

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
3	**Fenamiphos (aka phenamiphos)**	Insecticide	Not approved	LOQ
3	**Fenazaquin**	Insecticide	Approved	YES
3	**Fenbuconazole**	Fungicide	Not approved	YES
2	**Fenoxaprop-P**	Herbicide	Approved	YES
3	**Fentin acetate**	Fungicide	Not approved	LOQ
3	**Fentin hydroxide**	Fungicide	Not approved	LOQ
1	**Flocoumafen**	Rodenticide	Not approved	DEFAULT
2	**Flubendiamide**	Insecticide	Not approved	YES
2	**Fludioxonil**	Fungicide	Approved	YES
2	**Flufenacet (formerly fluthiamide)**	Herbicide	Not approved	YES
3	**Flumetralin**	Plant Growth Regulator	Not approved	LOQ
3	**Fluquinconazole**	Fungicide	Not approved	LOQ
1	**Flurochloridone**	Herbicide	Approved	YES
3	**Flurtamone**	Herbicide	Not approved	LOQ
1	**Flusilazole**	Fungicide	Not approved	YES
1	**Formaldehyde**	Fungicide	Not approved	DEFAULT
1	**Glufosinate**	Herbicide	Not approved	YES
1	**Halosulfuron-methyl**	Herbicide	Approved	YES
1	**Hexachlorobenzene**	Fungicide	Not approved	YES
3	**Imazosulfuron**	Herbicide	Not approved	LOQ
3	**Imidacloprid**	Insecticide	Not approved	YES
3	**Indoxacarb**	Insecticide	Not approved	YES
1	**Ipconazole**	Fungicide	Not approved	YES

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
1	**Iprodione**	Fungicide/ Nematicide	Not approved	YES
3	**Isoproturon**	Herbicide	Not approved	LOQ
1	**Isopyrazam**	Fungicide	Not approved	YES
1	**Linuron**	Herbicide	Not approved	YES
1	**Lufenuron**	Insecticide	Not approved	YES
3	**Malathion**	Insecticide	Approved	YES
*	**Mancozeb**	Fungicide	Not approved	YES
1	**Maneb**	Fungicide	Not approved	YES
3	**Mecoprop**	Herbicide	Not approved	LOQ
2	**Mepanipyrim**	Fungicide	Not approved	YES
3	**Metconazole**	Fungicide	Approved	YES
3	**Methiocarb (aka mercaptodimethur)**	Insecticide	Not approved	LOQ
3	**Methoxychlor**	Insecticide	Not approved	LOQ
*	**Metiram**	Fungicide	Not approved	YES
3	**Metolachlor**	Herbicide	Not approved	LOQ
2	**Metribuzin**	Herbicide	Not approved	YES
3	**Molinate**	Herbicide	Not approved	LOQ
3	**Myclobutanil**	Fungicide	Not approved	YES
1	**Nitrofen**	Herbicide	Not approved	LOQ
3	**Novaluron**	Insecticide	Not approved	LOQ
3	**Oxamyl**	Insecticide/ Nematicide	Not approved	LOQ
3	**Oxasulfuron**	Herbicide	Not approved	LOQ
1	**Oxyfluorfen**	Herbicide	Approved	YES

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
3	**Paclobutrazol**	Plant Growth Regulator	Approved	YES
1	**Paraffin oil**	Insecticide	Approved	DEFAULT/EXEMPT
3	**Pendimethalin**	Herbicide	Approved	YES
3	**Penflufen**	Fungicide	Not approved	LOQ
3	**Permethrin**	Insecticide	Not approved	YES
1	**Petroleum oils/(CAS 74869-22-0))**	Insecticide	Not approved	LOQ
3	**Phosmet**	Insecticide	Not approved	LOQ
3	**Picoxystrobin**	Fungicide	Not approved	YES
3	**Profoxydim**	Herbicide	Not approved	LOQ
3	**Propanil**	Herbicide	Not approved	LOQ
3	**Propargite**	Insecticide	Not approved	YES
1	**Propiconazole**	Fungicide	Not approved	LOQ
3	**Propineb**	Fungicide	Not approved	LOQ
2	**Proquinazid**	Fungicide	Approved	YES
3	**Prothioconazole**	Fungicide	Approved	YES
2	**Pymetrozine**	Insecticide	Not approved	LOQ
1	**Quinolin-8-ol**	Fungicide	Approved	LOQ
1	**Quinoxyfen**	Fungicide	Not approved	YES
3	**S-Metolachlor**	Herbicide	Not approved	LOQ
1	**Spirodiclofen**	Insecticide	Not approved	YES
3	**Sulfoxaflor**	Insecticide	Approved	YES
3	**Tebuconazole**	Fungicide	Approved	YES
3	**Tepraloxydim**	Herbicide	Not approved	LOQ

Category	Active Ingredients	Pesticide Type	Approval Status	EU MRL
3	**Tetraconazole**	Fungicide	Approved	YES
1	**Thiacloprid**	Insecticide	Not approved	LOQ
3	**Thiamethoxam**	Insecticide	Not approved	LOQ
1	**Thiophanate-methyl**	Fungicide	Not approved	LOQ
3	**Thiram**	Fungicide	Not approved	LOQ
1	**Triadimenol**	Fungicide	Not approved	LOQ
3	**Triasulfuron**	Herbicide	Not approved	LOQ
3	**Tricyclazole**	Fungicide	Not approved	LOQ
1	**Tridemorph**	Fungicide	Not approved	LOQ
1	**Triflumizole**	Fungicide	Not approved	LOQ
2	**Triflusulfuron (formerly Triflusulfuron-methyl)**	Herbicide	Not approved	LOQ
3	**Triticonazole**	Fungicide	Approved	LOQ
1	**Vinclozolin**	Fungicide	Not approved	LOQ
1	**Warfarin (aka coumaphene)**	Rodenticide	Not approved	LOQ

APPENDIX B – EMERGENCY USES GRANTED

Active substance	Number of Emergency Uses (2016-2026)	Number of Member States (2016-2026)
Thiamethoxam	108	17
Diquat	99	15
Clothianidin	65	14
Imidacloprid	65	12
Beta-Cyfluthrin	48	12
Chlorophacinone*	35	1
Mancozeb*	33	11
Thiacloprid*	24	9
Alpha-Cypermethrin (aka alphamethrin)	23	7
Acibenzolar-S-methyl (benzothiadiazole)	21	6

Active substance	Number of Emergency Uses (2016-2026)	Number of Member States (2016-2026)
Phosmet	21	7
Metribuzin*	19	3
Chlorpropham	17	2
Propanil	15	4
Dimethomorph*	14	6
Thiophanate-methyl*	14	5
Chlorpyrifos-methyl	13	4
Indoxacarb	12	7
Dimethoate	11	6
Iprodione	11	6
Propiconazole*	11	3
Bromadiolone*	9	3
Chlorpyrifos	9	3
Diflubenzuron	9	4
Linuron*	9	1
Thiram	9	5
Bromoxynil	8	4
Profoxydim	8	4
Cyanamide (H & Ca cyanamide)	7	2
Ethoprophos	7	4
Flufenacet (formerly fluthiamide)*	6	2
S-Metolachlor	6	3
Spirodiclofen*	6	2
Triflusulfuron	6	2
Benfluralin	5	2
Molinate	5	2
Clofentezine*	4	3
Famoxadone	4	1
Fenamiphos (aka phenamiphos)	4	1
Oxamyl	4	2
Carboxin	3	1
Difenacoum*	3	1
Ipconazole*	3	2
Carbetamide*	2	1
Epoxiconazole*	2	2
Bifenthrin	1	1
Chlorothalonil	1	1
Cyproconazole*	1	1
Flumetralin	1	1
Picoxystrobin	1	1

* Substances also included in JRC study.

APPENDIX C – MRLS AT RISK PER COMMODITY

MRL percentage at risk does not necessarily mean the corresponding commodity is produced in that market, it only means that market has established MRLs on that commodity and that commodity was listed in the HS-8 description, therefore was reviewed for the purpose of this assessment. See Limitations of MRL Data in MRL Analysis section under the Analysis Framework section earlier in this assessment for further details.

Argentina

MRL Commodity	Argentinian MRLs	Impacted MRLs	% at risk
Fig	1	1	100%
Lemon	80	52	65%
Carambola	3	1	33%
Date	3	1	33%
Guava	3	1	33%
Jackfruit	3	1	33%
Grape, Wine	36	9	25%
Blueberry, Highbush	18	4	22%
Blueberry, Lowbush	18	4	22%
Avocado	5	1	20%
Tea, Leaves	10	2	20%
Raspberry, Black/Red	19	3	16%
Grape, Table	93	13	14%
Tomato	108	14	13%
Apricot	39	5	13%
Pear	103	13	13%
Apple	119	15	13%
Cherry, Sweet	64	8	13%
Yerba Mate Leaf	8	1	13%
Strawberry	57	7	12%
Squash, Winter (Acorn)	33	4	12%
Peach	85	10	12%
Melon (Melon, Honeydew)	35	4	11%
Sweet Potato	27	3	11%
Chickpea	10	1	10%
Mandarin (Tangerine)	80	8	10%
Orange, Sweet	85	8	9%
Grapefruit	77	7	9%

MRL Commodity	Argentinian MRLs	Impacted MRLs	% at risk
Clementine	60	5	8%
Plum (Prune)	48	4	8%
Lime	61	5	8%
Pea, Field (Dry)	49	4	8%
Soybean	144	11	8%
Potato	107	8	7%
Banana	14	1	7%
Coconut	15	1	7%
Pea, English	48	3	6%
Bean, Field (Dry)	66	4	6%
Bean, Kidney	66	4	6%
Corn, Grain	100	5	5%
Lentil	20	1	5%
Rice	40	2	5%
Garlic, Bulb	42	2	5%
Sunflower, Seed	79	3	4%
Nut, Pecan	34	1	3%
Onion, Bulb	57	1	2%
Peanut	77	1	1%

Brazil

MRL Commodity	Brazilian MRLs	Impacted MRLs	% at risk
Apricot	1	1	100%
Wine Grape	110	30	27%
Pear	50	9	18%
Pea, English	92	16	17%
Tomato	156	24	15%
Beet, Garden, Tops	46	7	15%
Swiss, Chard	46	7	15%
Table Grape	115	17	15%
Olive	42	6	14%
Melons	123	17	14%
Apple	109	15	14%
Nut, Brazil	22	3	14%
Mango	76	10	13%
Watermelon	115	15	13%
Banana	57	7	12%
Pepper, Bell	82	10	12%

MRL Commodity	Brazilian MRLs	Impacted MRLs	% at risk
Papaya/ Mangosteen	74	9	12%
Pepper, Non-Bell	69	8	12%
Wheat, Grain	148	17	11%
Plum (Prune)	44	5	11%
Rye, Grain	89	10	11%
Oranges, Sweet	147	16	11%
Nut, Macadamia	38	4	11%
Bean, Field (Dry)	166	17	10%
Barley, Grain	108	11	10%
Avocado	59	6	10%
Grapefruit	144	14	10%
Lemon	147	14	10%
Lime	147	14	10%
Mandarin (Tangerine)	147	14	10%
Strawberry	63	6	10%
Lychee (Litchi)	32	3	9%
Oat, Grain	99	9	9%
Onion, Bulb	121	11	9%
Ginger, Root	49	4	8%
Carrot	91	7	8%
Nut, Pecan	40	3	8%
Guava	59	4	7%
Coconut	45	3	7%
Soybean	215	14	7%
Rice	127	8	6%
Nut, Cashew	60	3	5%
Passion Fruit	66	3	5%
Corn, Grain	159	7	4%
Cassava, Root	71	3	4%
Fig	55	2	4%
Coffee Bean, Green	141	5	4%
Sweet Potato	58	2	3%
Millet, Pearl, Grain	92	3	3%
Pineapple	62	2	3%
Peanut	117	3	3%
Yam, True, Tuber	95	2	2%

Canada

MRL Commodity	Canadian MRLs	Impacted MRLs	% at risk
Guava	8	2	25%
Artichoke, Globe	19	4	21%
Olive	10	2	20%
Banana	35	6	17%
Avocado	24	4	17%
Mango	27	4	15%
Tomato	139	19	14%
Grape, Table	132	18	14%
Grape, Wine	132	18	14%
Apricot	84	11	13%
Peach / Nectarine	102	13	13%
Beet, Garden, Tops	32	4	13%
Pear	113	14	12%
Apple	130	16	12%
Pepper, Bell	114	14	12%
Squash, Winter (Acorn)	91	11	12%
Pepper, Non-Bell	109	13	12%
Pea, Pigeon	76	9	12%
Cherry, Sweet	110	13	12%
Chickpea	85	10	12%
Lentil	90	10	11%
Pea, Field (Dry)	91	10	11%
Rape Seed (Canola)	73	8	11%
Bean, Kidney	112	12	11%
Blueberry, Highbush	85	9	11%
Pea, Blackeyed	114	12	11%
Bean, Field (Dry)	108	11	10%
Cabbage	90	9	10%
Plum (Prune)	95	9	9%
Coffee Bean, Green	22	2	9%
Strawberry	103	9	9%
Oat, Grain	69	6	9%
Rye, Grain	59	5	8%
Flaxseed/Linseed	72	6	8%
Blueberry, Lowbush	109	9	8%
Lupin	110	9	8%
Wheat, Grain	110	9	8%
Cranberry	75	6	8%
Ginger, Root	63	5	8%
Papaya	26	2	8%

MRL Commodity	Canadian MRLs	Impacted MRLs	% at risk
Mustard Seed (Oilseed)	67	5	7%
Potato	110	8	7%
Soybean	113	8	7%
Rice	43	3	7%
Nut, Brazil	59	4	7%
Nut, Cashew	60	4	7%
Sweet Potato	75	5	7%
Barley, Grain	92	6	7%
Coconut / Nut, Betel	46	3	7%
Japanese Horse-Chestnut	46	3	7%
Nut, Macadamia	62	4	6%
Yam, True, Tuber	64	4	6%
Pea, English	82	5	6%
Pineapple	18	1	6%
Blackberry	76	4	5%
Corn, Grain	123	6	5%
Canary Seed	25	1	4%
Raspberry, Black/Red	79	3	4%
Loganberry	76	2	3%
Buckwheat, Grain	44	1	2%
Millet, Pearl, Grain	47	1	2%
Corn, Sweet	109	2	2%

Chile

MRL Commodity	Chilean MRLs	Impacted MRLs	% at risk
Carambola (Cashew Apples)	2	1	50%
Date	2	1	50%
Fig	2	1	50%
Guava	2	1	50%
Pea, Field (Dry)	21	6	29%
Dragon Fruit	4	1	25%
Jackfruit	4	1	25%
Lychee (Litchi)	4	1	25%
Papaya	4	1	25%
Passion Fruit	4	1	25%
Sapodilla	4	1	25%
Pea, Blackeyed	17	4	24%

MRL Commodity	Chilean MRLs	Impacted MRLs	% at risk
Quince	66	14	21%
Bean, Kidney	55	11	20%
Pepper, Bell	75	15	20%
Grapefruit	41	8	20%
Tomato	106	19	18%
Chickpea	17	3	18%
Lupin	17	3	18%
Clementine	63	11	17%
Mandarin (Tangerine)	63	11	17%
Orange, Sweet	69	12	17%
Grape, Wine	81	14	17%
Squash, Winter (Acorn)	41	7	17%
Blueberry, Highbush	65	11	17%
Blueberry, Lowbush	65	11	17%
Pea, English	55	9	16%
Lemon	69	11	16%
Melons (Melon, Honeydew)	61	9	15%
Pear	104	15	14%
Leek	21	3	14%
Sweet Potato	21	3	14%
Yam, True, Tuber	21	3	14%
Apple	107	15	14%
Apricot	93	13	14%
Grape, Table	101	14	14%
Peach (Nectarine)	102	14	14%
Cherry, Sweet	93	12	13%
Cabbage	56	7	13%
Onion, Bulb	80	9	11%
Plum (Prune)	99	11	11%
Shallot, Bulb	9	1	11%
Asparagus	37	4	11%
Strawberry	67	7	10%
Garlic, Bulb	68	7	10%
Nut, Pistachio	32	3	9%
Beet, Garden, Root	43	4	9%
Blackberry	22	2	9%
Japanese Horse-Chestnut	34	3	9%
Nut, Brazil	34	3	9%
Nut, Cashew	34	3	9%
Nut, Chestnut	34	3	9%

MRL Commodity	Chilean MRLs	Impacted MRLs	% at risk
Nut, Macadamia	34	3	9%
Nut, Pine	34	3	9%
Raspberry, Black/Red	69	6	9%
Nut, Hazelnut (Filbert)	35	3	9%
Nut, Pecan	35	3	9%
Artichoke, Globe	48	4	8%
Coconut	36	3	8%
Sunflower, Seed	12	1	8%
Mango	13	1	8%
Mulberry	13	1	8%
Olive	26	2	8%
Cranberry	14	1	7%
Gooseberry	14	1	7%
Nut, Walnut, English (Persian)	64	4	6%
Currant, Black / Currant, Red, White	18	1	6%
Avocado	38	2	5%
Nut, Almond	78	4	5%
Beet, Garden, Tops	32	1	3%
Corn, Sweet	44	1	2%
Corn, Grain	51	1	2%
Kiwifruit, Fuzzy	54	1	2%
Pineapple	56	1	2%

Costa Rica

MRL Commodity	Costa Rican MRLs	Impacted MRLs	% at risk
Carambola	11	2	18%
Mandarin (Tangerine)	97	17	18%
Squash, Summer (Zucchini) (Courgettes)	58	10	17%
Orange, Sweet	106	18	17%
Pumpkin	76	12	16%
Squash, Winter (Acorn)	77	12	16%
Pear	91	14	15%
Grapefruit	81	12	15%
Apple	145	21	14%
Sweet Potato	42	6	14%
Tomato	162	23	14%
Cucumber (Gherkins)	115	16	14%
Grape, Wine	136	18	13%

MRL Commodity	Costa Rican MRLs	Impacted MRLs	% at risk
Cherry, Sweet	103	13	13%
Grape, Table	136	17	13%
Pepper, Bell	151	18	12%
Melons (Melon, Honeydew)	156	18	12%
Watermelon	142	16	11%
Carrot	115	11	10%
Banana	127	12	9%
Onion, Bulb	127	12	9%
Papaya (Mangosteen)	111	10	9%
Mango	103	9	9%
Plum (Prune)	111	8	7%
Radish, Root	88	6	7%
Beet, Garden, Root (Beetroots)	132	8	6%
Turnip, Root	70	4	6%
Celery	147	8	5%
Corn, Grain	129	6	5%
Ginger, Root	66	3	5%
Yam, True, Tuber	74	3	4%
Cassava, Root	75	3	4%
Avocado	107	4	4%
Coffee Bean, Green	154	5	3%
Guava	84	2	2%
Passion Fruit	84	2	2%
Sugar Cane	97	2	2%
Pineapple	131	2	2%

Mexico

MRL Commodity	Mexican MRLs	Impacted MRLs	% at risk
Currant, Black	1	1	100%
Coconut	2	1	50%
Nut, Pistachio	3	1	33%
Banana	59	11	19%
Apple	112	19	17%
Pear	82	13	16%
Papaya (Mangosteen)	51	8	16%
Beet, Garden, Tops	26	4	15%
Swiss Chard	26	4	15%
Mandarin (Tangerine)	100	15	15%

MRL Commodity	Mexican MRLs	Impacted MRLs	% at risk
Lime	94	14	15%
Grape, Wine	101	15	15%
Carrot	21	3	14%
Leek	49	7	14%
Orange, Sweet	108	15	14%
Grape, Table	101	14	14%
Strawberry	101	14	14%
Tomato	183	25	14%
Lemon	103	14	14%
Grapefruit	104	14	13%
Melon (Melon, Honeydew)	145	19	13%
Mango	39	5	13%
Onion, Bulb	102	13	13%
Blueberry, Highbush	74	9	12%
Bean, Kidney	93	11	12%
Currant, Red, White	60	7	12%
Squash, Winter (Acorn)	138	16	12%
Pepper, Bell	121	14	12%
Pepper, Non-Bell	161	18	11%
Coffee Bean, Green	27	3	11%
Bean, Field (Dry)	93	10	11%
Chickpea	56	6	11%
Lentil	48	5	10%
Apricot	20	2	10%
Nut, Almond	20	2	10%
Nut, Hazelnut (Filbert)	10	1	10%
Cranberry	74	7	9%
Pea, English	68	6	9%
Pea, Field (Dry)	68	6	9%
Barley, Grain	104	9	9%
Garlic, Bulb	82	7	9%
Nut, Pecan	26	2	8%
Plum (Prune)	26	2	8%
Raspberry, Black/Red	78	6	8%
Avocado	67	5	7%
Peach (Nectarine)	41	3	7%
Nut, Macadamia	14	1	7%
Potato	180	12	7%
Asparagus	62	4	6%
Blackberry	78	5	6%

MRL Commodity	Mexican MRLs	Impacted MRLs	% at risk
Nut, Walnut, English (Persian)	52	3	6%
Clementine	35	2	6%
Pineapple	40	2	5%
Corn, Grain	164	7	4%
Corn, Sweet	164	2	1%

Peru

MRL Commodity	Peruvian MRLs	Impacted MRLs	% at risk
Melons (Melon, Honeydew)	18	5	28%
Blueberry, Highbush	13	3	23%
Mandarin (Tangerine)	36	7	19%
Pepper, Bell	42	8	19%
Pepper, Non-Bell	44	8	18%
Apple	48	8	17%
Banana	6	1	17%
Lemon	12	2	17%
Tomato	74	12	16%
Garlic, Bulb	32	5	16%
Grape, Wine	78	12	15%
Orange, Sweet	39	6	15%
Lime	14	2	14%
Grape, Table	78	11	14%
Coffee Bean, Green	23	3	13%
Rice	51	6	12%
Bean, Kidney	47	5	11%
Artichoke, Globe	49	5	10%
Asparagus	70	7	10%
Mango	30	3	10%
Onion, Bulb	64	6	9%
Peach (Nectarine)	25	2	8%
Potato	75	5	7%
Quinoa, Grain	28	1	4%
Strawberry	34	1	3%
Corn, Sweet	39	1	3%
Avocado	49	1	2%

United States

MRL Commodity	American MRLs	Impacted MRLs	% at risk
Cranberry	92	55	60%
Cashew Apple	5	1	20%
Rye, Grain	66	10	15%
Guava	30	4	13%
Apple	147	19	13%
Orange, Sweet	117	15	13%
Tomato	157	20	13%
Grape, Wine	141	17	12%
Apricot	108	13	12%
Hop, Dried Cones	76	9	12%
Artichoke, Globe	43	5	12%
Pear	138	16	12%
Olive	26	3	12%
Strawberry	105	12	11%
Wheat, Grain	140	16	11%
Bean, Kidney	126	14	11%
Pea, Blackeyed	126	14	11%
Pepper, Bell	144	16	11%
Pepper, Non-Bell	144	16	11%
Nectarine (Peach)	128	14	11%
Squash, Winter (Acorn)	128	14	11%
Barley, Grain	112	12	11%
Grape, Table	140	15	11%
Oat, Grain	84	9	11%
Cherry, Sweet	129	13	10%
Bean, Field (Dry)	120	12	10%
Mango	50	5	10%
Pea, Field (Dry)	100	10	10%
Cabbage	111	11	10%
Rice	89	8	9%
Plum (Prune)	112	10	9%
Chickpea	137	12	9%
Carrot	81	7	9%
Banana	49	4	8%
Lupin	124	10	8%
Pea, Pigeon	112	9	8%
Blueberry, Highbush	100	8	8%
Potato	142	11	8%
Onion, Bulb	104	8	8%

MRL Commodity	American MRLs	Impacted MRLs	% at risk
Soybean	156	12	8%
Beet, Garden, Root	67	5	7%
Lentil	108	8	7%
Blueberry, Lowbush	124	9	7%
Nut, Chestnut	112	8	7%
Papaya (Mangosteen)	57	4	7%
Nut, Brazil	115	8	7%
Nut, Cashew	115	8	7%
Nut, Walnut, English (Persian)	132	9	7%
Pea, English	103	7	7%
Nut, Macadamia	119	8	7%
Avocado	60	4	7%
Japanese Horse-Chestnut	79	5	6%
Nut, Hazelnut (Filbert)	127	8	6%
Nut, Pistachio	112	7	6%
Nut, Pine	82	5	6%
Nut, Pecan	133	8	6%
Gooseberry	117	7	6%
Currant, Black / (Currant, Red, White)	86	5	6%
Swiss Chard	95	5	5%
Corn, Grain	165	8	5%
Coconut	84	4	5%
Ginger, Root	109	5	5%
Buckwheat, Grain	45	2	4%
Blackberry	91	4	4%
Carambola	23	1	4%
Nut, Almond	143	6	4%
Fig	24	1	4%
Lychee (Litchi)	24	1	4%
Millet, Pearl, Grain	50	2	4%
Sweet Potato	125	5	4%
Artichoke, Jerusalem, Tuber	106	4	4%
Coffee Bean, Green	30	1	3%
Raspberry, Black/Red	92	3	3%
Yam, True, Tuber	126	4	3%
Pineapple	35	1	3%
Arrowroot, Ruber	107	3	3%
Cassava, Root	107	3	3%
Peanut	114	3	3%
Corn, Sweet	127	3	2%
Loganberry	91	2	2%

MRL Commodity	American MRLs	Impacted MRLs	% at risk
Fennel, Florence, Bulb	93	2	2%
Sunflower, Seed	63	1	2%

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