Centre for Environment & Agriculture

India's Tea Trade

SPS Barriers from EU – with special reference to pesticide MRLs

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What is MRL?

- Maximum Residue Limit (MRL) is the maximum acceptable level of a pesticide or veterinary drug that is legally tolerated in food and agricultural products when they are traded. It is often measured and expressed in terms of parts per million (ppm or mg/kg).
- MRL is not a toxicological safety standard, but only a trading standard.
- MRLs widely vary among countries for a given pesticide/crop.
- The MRL can be as low as **0.01 ppm.** This equals **1 gm per 100 tons** of rice or any other agri. commodity. At this insignificant level, a pesticide would not be toxicologically, biologically or environmentally relevant.

Understanding the Legal force behind the MRLs

- The **Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement)** entered into force with the establishment of the World Trade Organization (WTO) on 1st Jan 1995. Its provisions are legally binding on all countries that are members of the WTO.

- The SPS agreement covers both **sanitary** (human and animal health) and **phytosanitary** (plant health) measures (SPS Measures) and applicable to food products of plant and animal origin whether domestically produced or imported.

- The SPS Agreement allows WTO member countries to set their own SPS standards. At the same time, it also says standards must be based on science. Whose science? This is a big question.

- WTO members can also apply the "precautionary principle", temporarily (Article 5.7) to deal with scientific uncertainty.

- All these would help understanding the varying levels of MRLs among the countries for a given pesticide and agri. commodity/food. Non-harmonized MRLs and regulatory heterogeneity are a global issue. For developing countries, meeting the MRL requirements of developed countries can be challenging.

- **An unpleasant truth: The MRLs can at times be politically/commercially driven to deliberately impede the trade.**

Divergence in MRLs

> ***"Greater fragmentation and divergence in MRL policies around the world coupled with evolving technological capacity that increases testing precision, often translates into elevated costs and market impacts throughout the agricultural supply chain."***

- United States International Trade Commission in Global Economic Impact of Missing and Low pesticide Maximum Residue Levels, 2021

USA's criticism against EU's Sanitary and Phytosanitary(SPS) barriers

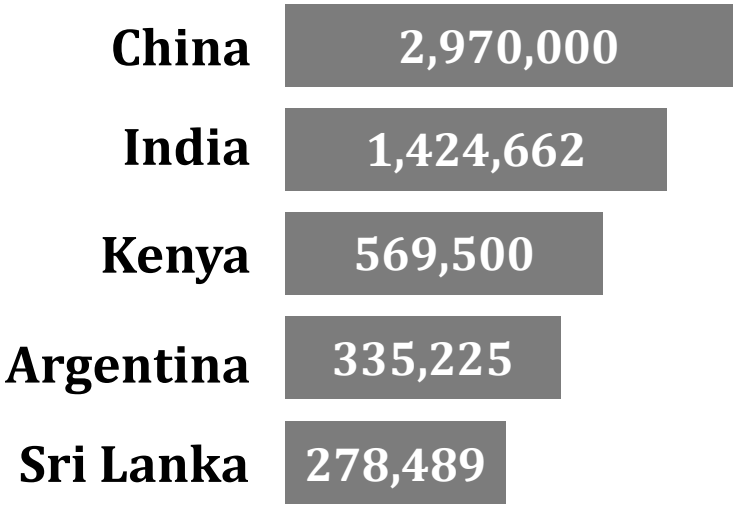
"The United States remain concerned about a number of measures the EU maintains ostensibly for the purpose of food safety. Specifically, the US is concerned that these measures unnecessarily restrict trade without furthering their safety objectives because they are not based on scientific principles, are maintained without sufficient scientific evidence, or are applied beyond the extent necessary."

Ref : 2021 Foreign Trade Barriers, p.192 published by USTR

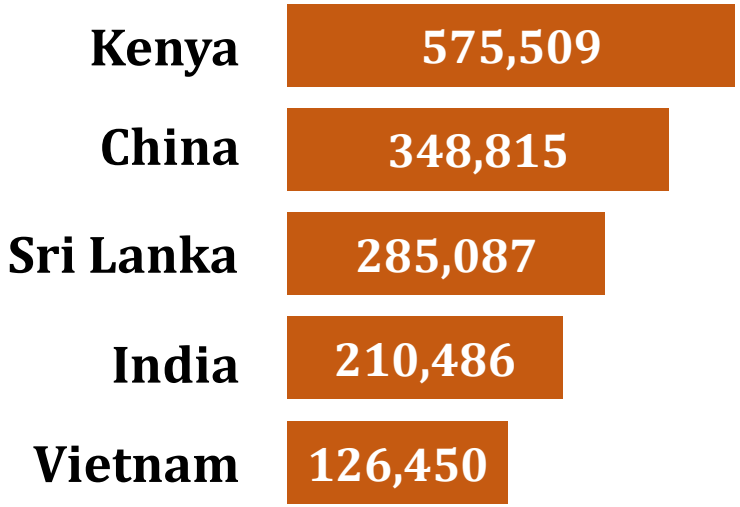
- Other governments including India must be equally assertive in voicing their opposition to the EU's unscientific SPS barriers.

Tea. Top 5 Producers, Exporters & Importers (2020)

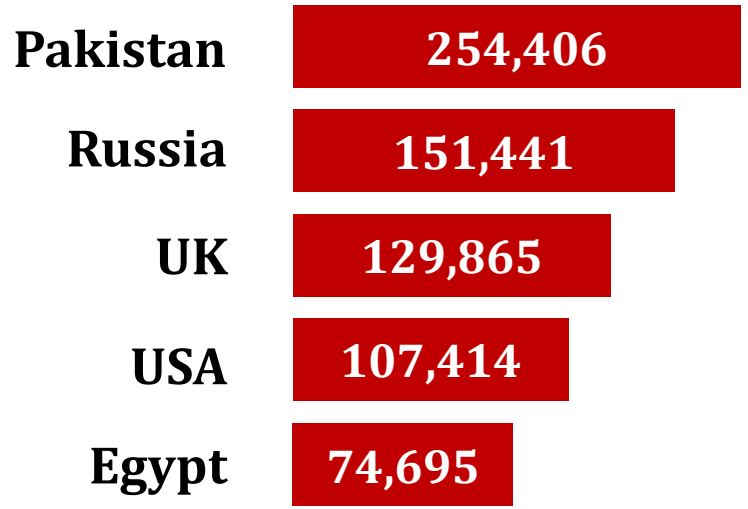
Top 5 Producers



Top 5 Exporters



Top 5 Importers



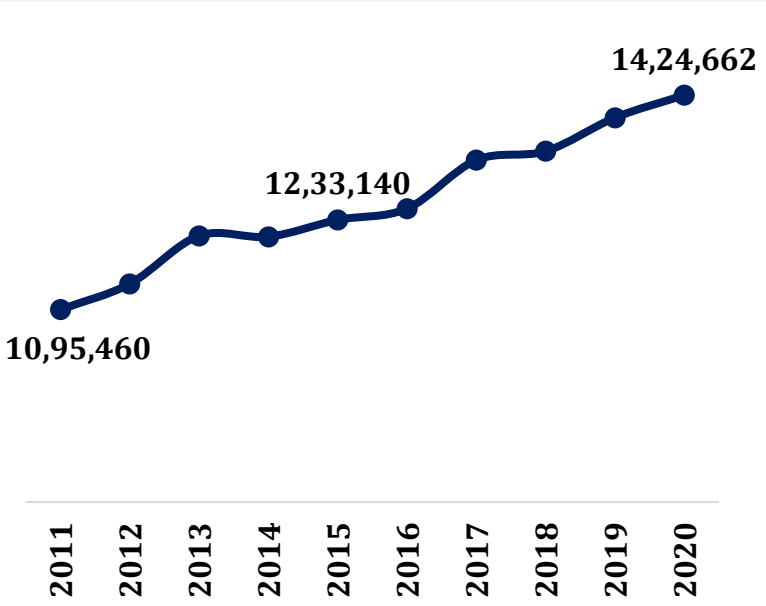
Source: FAOSTAT (Accessed on 30th July 2022)

Unit - tons

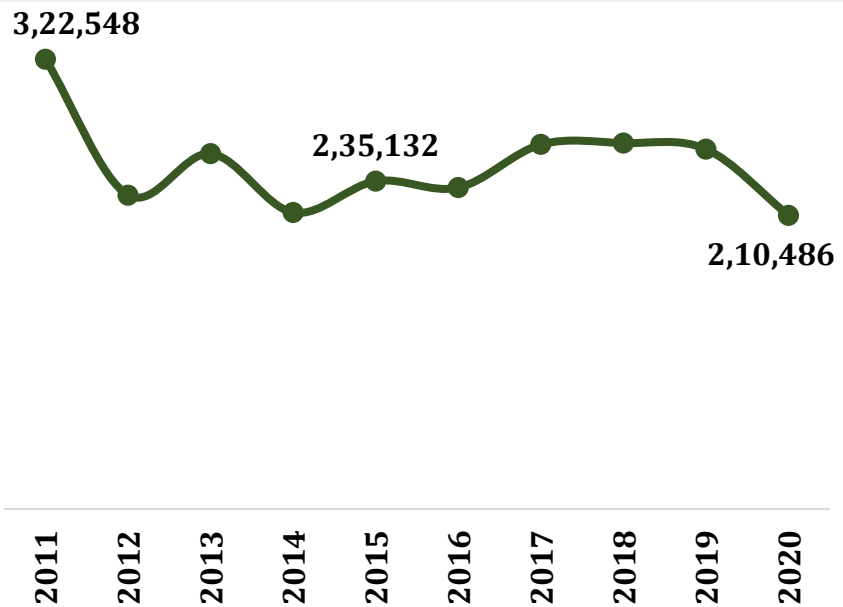
- ❑ **Total world Production: 7 mn tons (70.24 lakh tons).**
- ❑ **The world production/consumption has grown 45% between 2011 and 2020.**

Tea. India's Production and Trade .What do data show?

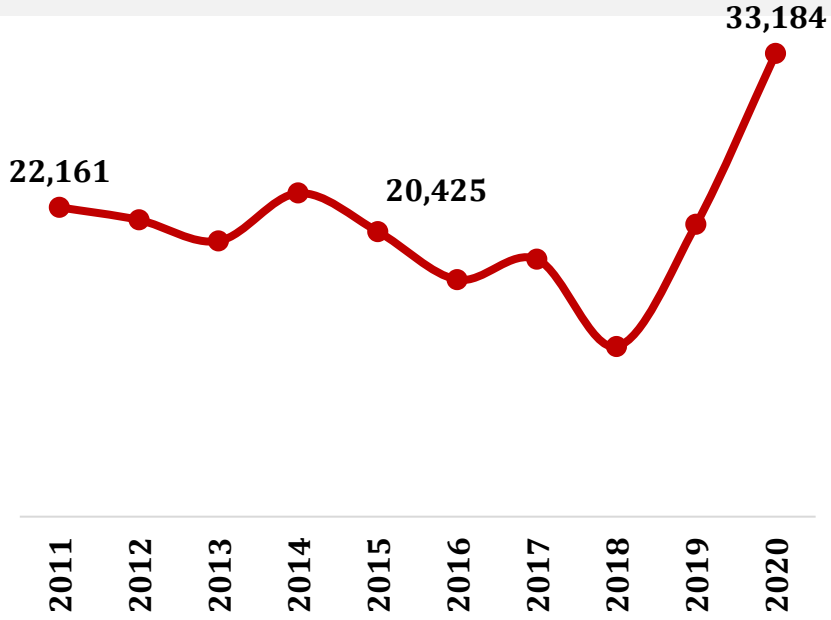
India's Tea Production



India's Tea Export



India's Tea Import



Source: FAOSTAT (Accessed on 30th July 2022)

Unit: Tons

- ❑ India's tea production has grown 30% since 2011. This is less than the global growth (45%).
- ❑ During this period India's export declined by 35% and import grew by 50%.
- ❑ Share of export in India's tea production has declined from 30% in 2011 to 15% now

Top 10 Buyers of India's Tea (2020)

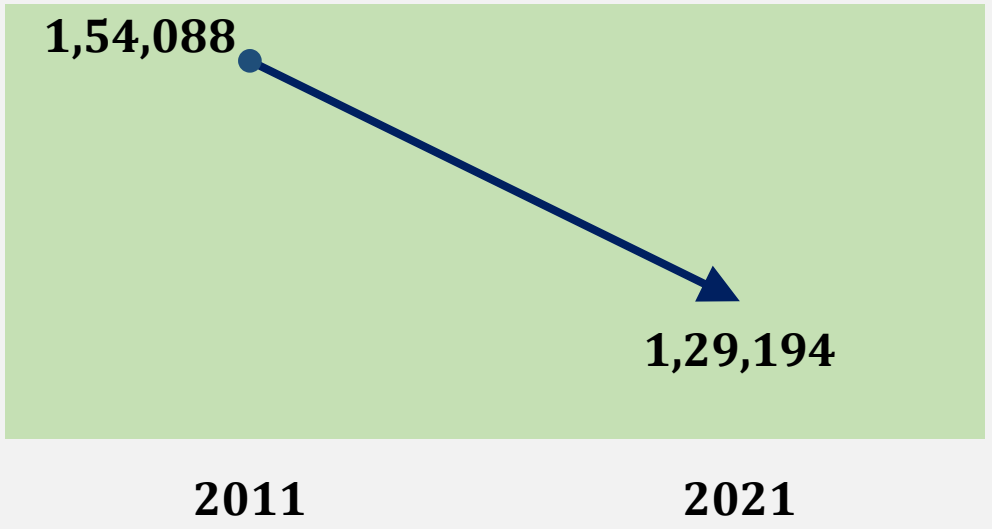
Rank	Country	Export Quantity (tons)	Share
1	Russia	37,428	18%
2	Iran	36,000	17%
3	USA	12,703	6%
4	UAE	12,068	6%
5	China	11,393	5%
6	UK	10,422	5%
7	Kazakhstan	9,344	4%
8	Germany	8,606	4%
9	Iraq	8,452	4%
10	Poland	6,048	3%
India's Total Tea Export		210,486	

Source: FAOSTAT (Accessed on 30th July 2022)

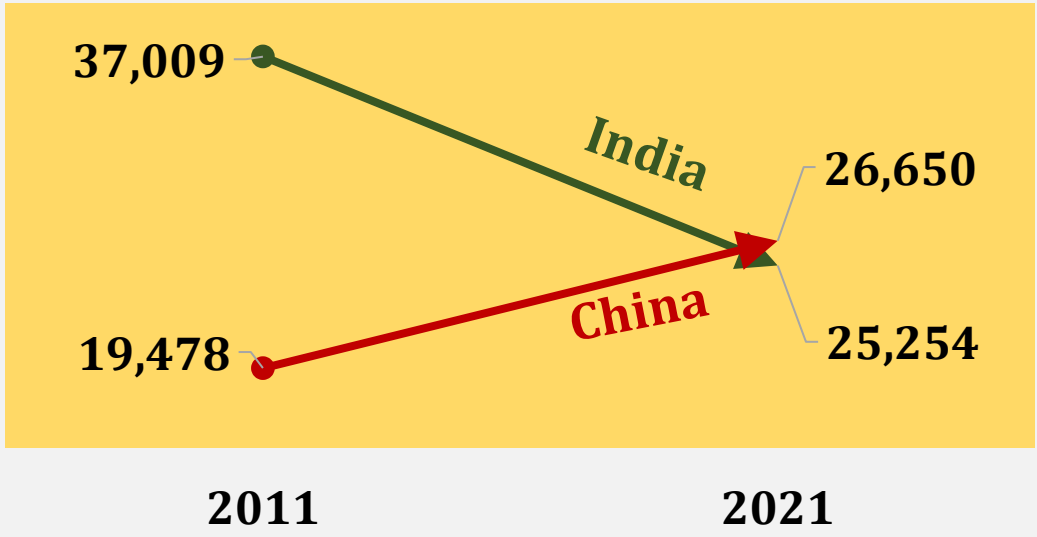
- **Top 10 account for 72% of India's tea export. The share of EU in India's tea export is only 11%.**

Insights into EU's Tea Import/Consumption

EU-27 Total Tea Import*



Tea Export to EU-27. India & China



** EU's internal trade is excluded*
Source: WTO-ITC (Accessed on 29th July 2022)

Unit: Tons

- Tea consumption in the EU has sharply declined by 16% since 2011. Coffee consumption is growing in the EU.
- India's tea export to EU declined by 32%. China's export to EU increased by 37%.
- China receives more SPS notification from the EU than India. Yet, China has managed to steadily improve its market share in the EU.

No. of SPS Notifications from EU-RASFF (1981-2020)
All Countries . All Products

Hazard Category	Number of Notifications	Percentage Share
Pathogenic micro-organisms	14,177	18.6%
Mycotoxins	13,332	17.5%
Pesticide residues	8,013	10.5%
Composition	4,780	6.3%
Migration	4,042	5.3%
Others	**31,940**	**41.80%**

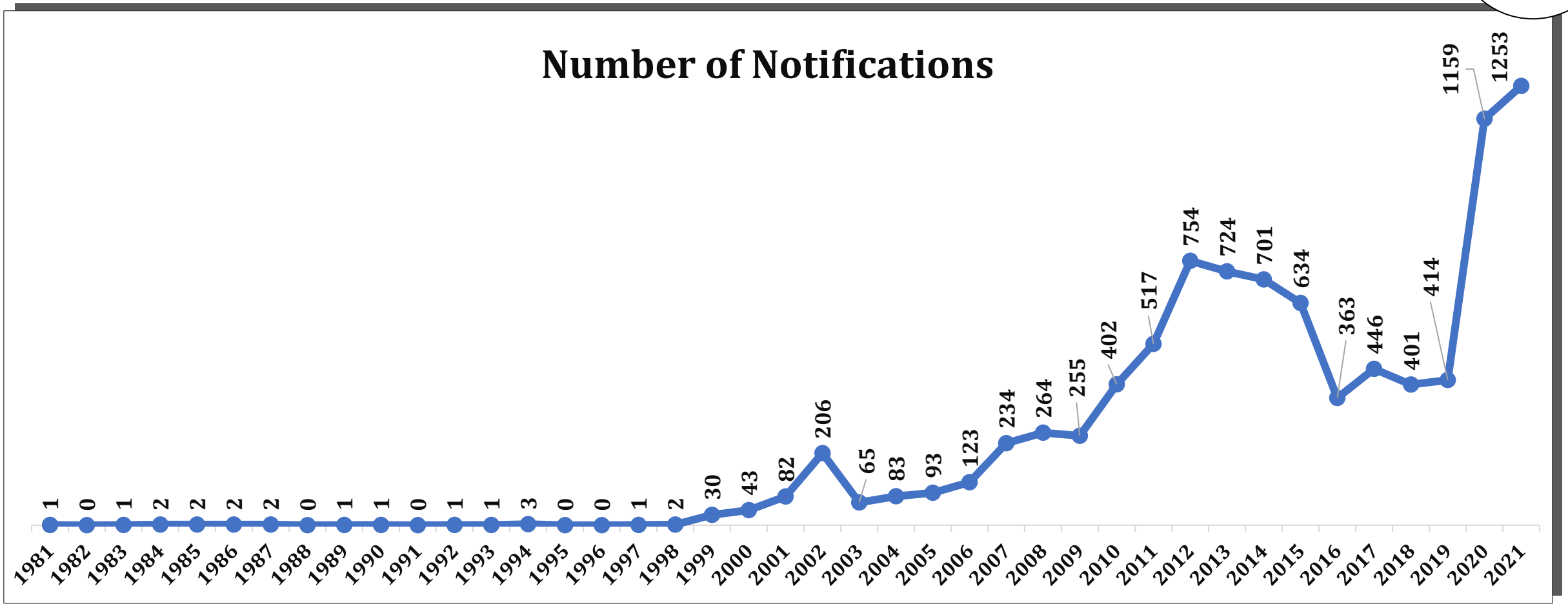
- **Pathogenic micro-organisms and mycotoxins remain the top two largest causes for rejections (totally 36%).**
- **Pesticides residues ranks third (10%).**

RASFF: Rapid Alert System for Food and Feed. It is a notification system followed by the European Commission for food safety issues within the EU

Source : Notification on Pesticides Residues in the Rapid Alert System for Food and Feed (RASFF) – 2022, by Marcin Piglowski.

Link:file:///C:/Users/20000294/Desktop/Notificaiton%20on%20Pesticide%20Residues%20in%20the%20Rapid%20Alert%20System%20for%20Food%20and%20Feed.pdf

Number of Notifications on Pesticides MRL violations from the EU (1981-2021)
All Countries All Products



Source : Notification on Pesticides Residues in the Rapid Alert System for Food and Feed (RASFF) – 2022 from 1981 to 2020, by Marcin Piglowski; data for 2021 extracted from RASFF on 30 July 2022.
Link: file:///C:/Users/20000294/Desktop/Notificaiton%20on%20Pesticide%20Residues%20in%20the%20Rapid%20Alert%20System%20for%20Food%20and%20Feed.pdf

Note the spurt in notifications involving pesticides MRL violations in recent years. MRLs are "science coated" trade barriers!

Number of Notifications involving Indian Tea from the EU.

Year	Total Number of Samples Tested	Samples failing for exceeding EU's MRL standard	Samples failing due to factor other than pesticides	Pesticide Reported	Non-Pesticides factor reported
2020	NA	0	0	None	None
2021	NA	1	0	Dinotefuran	None
2022 (1 Jan -27 July)	NA	1	11	Acetamiprid, Monocrotophos	Foreign bodies /botanicals in tea 1. Phyllanthus emblica (L) 2. Cymbopogon citratus 3. Asparagus recemosus Willd 4. Boerhavia diffusa 5. Myrica rubra 6. Plumbago zeylanica 7. Withania somnifera 8. Acorus calamus (L) 9. Nelumbo nucifera Gaertn 10. Aloe vera 11. Pterocarpus marsupium Roxb. 12. Eclipa alba 13. Valeriana officinalis
Total (1 Jan 2020 - 27 July 2022)	NA	2	11		

Source: RASFF (accessed on 27th July 2022)

- Out of 13 consignments notified / rejected between 1st Jan 2020 till 27th July 2022, 11 consignments (85%) were on account of presence of foreign bodies/botanicals in the tea.
- The foreign bodies/botanicals are of plant parts other than tea.
- Two rejections (15%) citied pesticide MRL violations involving 3 pesticides when tested at 0.01 ppm level.

Non tea plants (foreign botanicals) in Indian tea consignments identified /notified/rejected by EU - RASFF

Phyllanthus emblica (L)
(Indian gooseberry)

Cymbopogon citratus
(Lemon grass)

Myrica rubra
(Chinese strawberry)

Asparagus racemosus Willd
(Shatavari)

Acorus calamus
(Sweet flag)

Nelumbo nucifera
(Lotus)

Plumbago zeylanica
(Ceylon leadwort)

Withania somnifera
(Ashwagandha)

Boerhavia diffusa
(Punarnava)

Aloe Vera

Pterocarpus marsupium Roxb
(Indian kino)

Eclipta alba
(False daisy)

Valeriana officinalis
(Valerian)

Number of Notifications involving China's Tea from the EU.

Year	Total Number of Samples Tested	Samples failing for exceeding EU's MRL standard	Samples failing due to factor other than pesticides	Pesticide Reported	Non-Pesticides factor reported
2020	NA	15	0	Acetamiprid, Dinotefuran, Diafenthiuron, Imidacloprid, Tolfenpyrad, Cyhalothrin, Difenoconazole, Pyridaben, Lambda-cyhalothrin, Abamectin, Hexaflumuron, Triazophos, Dithiocarbamates, Pencycuron, Anthraquinone, Folpet, Fenpropathrin	None
2021	NA	16	2	Acetamiprid, Lambda-cyhalothrin, Chlorpyrifos, Tolfenpyrad, Biphenyl, Anthraquinone, 2-Phenylphenol, Propamocarb, Diafenthiuron, Dinotefuran, Buprofezin, Difenoconazole, Propiconazole, Pyridaben,	Unauthorised novel food, Other Plant Species (Jasminum polyanthum)
2022 (1 Jan - 27 July)	NA	5	0	Acetamiprid, Anthraquinone, Lambda-cyhalotrin, Dinotefuran, Imidacloprid, Flonicamid	None
Total (1 Jan 2020 - 27 July 2022)	NA	36	2		

Source: RASFF

- Out of 38 consignments notified/rejected between 1st Jan 2020 till 27th July 2022, a vast majority i.e. 36 consignments were rejected on account of presence of pesticides residues.
- In other words, 95% of these rejection of China's tea were on account of pesticides MRL violation.
- However China is able to increase the tea export to EU every year.

Understanding EU MRLs for Pesticides.

- **The EU maintains uniform tolerance/MRL of 0.01 ppm for all pesticides that are not registered for use in the EU countries.**
- In the EU, **MRLs** are set for more than **1300** pesticides covering **378 food products**.
- Of this **1300** pesticides, a default MRL of **0.01 ppm** is applicable to nearly **690** of these pesticides.
- In other words, for over **50%** of the pesticides the EU applies **0.01mg/kg** as default MRLs.
- **0.01 mg/kg = 1gm for every 100 tons.**
- At this trace level (1 gm in 100 tons), a pesticide would not be biologically, toxicologically and environmentally relevant.
- When tested at this level (0.01 ppm) , a few pesticide residues would certainly show up in some consignments.
- **EU has set 507 MRLs for paddy. Out of this 304 (60%) are below 0.01 ppm.**
- **0.01 ppm MRL is as good as zero MRL/tolerance. It acts as a strong non-tariff barrier to our agricultural exports.**

Technical/Legal problems with 0.01 MRL

- **The 0.01 ppm MRL is the Limit of Detection (LOD) during laboratory analysis.**
- **LOD is the smallest amount or concentration of a substance that can be detected (using Gas Chromatography) but not necessarily determined as an extact value.**
- **The EU MRL of 0.01 which is at LOD is as good as zero tolerance.**
- **This effectively means import tolerances are not currently in place for pesticides not registered for use in the EU.**
- **The EU MRLs (Maximum Residue Levels) should be rechristened as ZRLs (Zero Residue Levels).**

Questions:

1. **Is ZRL *"based on"* the international standards developed by JMPR/CODEX, a requirement under Article 5 of SPS Agreement?**
2. **Does ZRL demonstrate the existence of the relevant risk arising from the presence of 0.01 ppm of residues in agricultural commodities? Remember, this is a *sine quo non* as determined by WTO-Appellete Body in the EC-Hormones Dispute.**

Evidence of Zero Residue Level (ZRL) in the EU

On 10 Feb 2022, EU issued a notification rejecting a consignment of Basmati rice imported from Pakistan although the pesticide level detected was 0.01 ppm.

Notification Ref. No.	Pesticides Found	Analytical Result	EU's MRL Standard	Reason
2022.1891	Carbendazim	**0.01 mg/kg (0.01ppm)**	**0.01 mg/kg (0.01ppm)**	Carbendazim use is not authorised in EU

Source: RASFF (Accessed on 17th August 2022)

- **This is a clear evidence of the EU practicing ZRL. The EU rejects food consignments if the pesticide concerned is not registered over there even if the detection level is 0.01 mg/Kg.**
- **This is an indirect way of forcing other countries to use only those pesticides registered in the EU.**

EU pesticides MRL constantly undergoes changes.

Revisions notified in the last 5 weeks (1st July 2022 till 1st August 2022)

Date of notification	No of pesticides involved	Major crops covered
4th July	4	Rice, Wheat, Sesame seeds, Peas, Pulses, Tea, Coffee, Potato, Banana, Mango, Citrus, Melons, Tomato, Cauliflower etc.
6th July	2	
21st July	1	
25th July	10	
29th July	16	
1st August	4	
Total	**37**	

Source: European Commission as reported in global MRL news by BCGlobal

The EU MRLs change as frequently as the clouds in the sky !

- **37 changes in just 30 days!**
- **It is a herculean task to constantly monitor the ever changing MRLs for possible compliance.**

MRL violations in the EU.
For conventional and organic products.

- In the year 2020, the EU analysed **88141** food and feed samples for MRL compliance. Out of which, **5.1%** of the tested samples **exceeded the maximum residue levels.**

  Organic products;

  Of the **5783** organic food products analysed, **1067** of samples i.e as much as **20%** of the samples contained residues.

Source: The 2020 EU report on Pesticide Residues in Food

This is how China levels the playing field under WTO-SPS Agreement !

"118 tons of Evian mineral water has been seized and impounded by Chinese Health Inspectors because it contained excessive amounts of bacteria."

Link: https://consumerist.com/2007/05/30/evian-water-rejected-by-china-for-containing-excessive-amounts-of-bacteria/

- **Evian is a globally popular mineral water sourced from French Alps.**
- **This is an excellent example that shows how an assertive developing country can hit back; legitimately using the provisions of WTO-SPS Agreement.**
- **Many developing countries hesitate to take the developed countries head-on under the SPS Agreement. This must change.**
- **On an average 740 food shipments per year from EU were returned/rejected by China between 2013-19 citing SPS violations! The EU receives the maximum rejections from China!. (source : USDA)**
- ***Quid Pro Quo* levels the playing field in the era of WTO. Our FSSAI must begin to assert.**

Key Takeaways and Conclusion

- EU(27) is not a major market for Indian tea.
- Tea consumption in the EU has been steadily falling.
- Empirical evidence does not support the popular notion that use of pesticides is largely responsible for rejections from EU.
- Presence/Contamination of other plant species in the exported tea consignments cause major rejections.
- The default MRL of 0.01 ppm for most pesticides is a significant Non Tariff Barrier (NTB) to access EU market.
- The compliance cost of EU MRL is high with no guarantee of sustaining the export.
- Our FSSAI must create a level playing field. FSSAI doesn't subject food imports to MRL tests. This must change. *Quid pro quo* works in international trade.

Your questions and suggestions welcome

THANK YOU

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