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Pesticide Harmonised Risk Indicators - Ireland 2011 to 2024

Pesticide sales data in Ireland is collected annually, transmitted to Eurostat and published on the Department of Agriculture, Food and the Marine (DAFM) website - this can be viewed here: Pesticide Statistics.

The sales data for 2024 demonstrates that the volume of pesticides used in Ireland is relatively low, at 0.48kg/ha UAA (Utilised Agricultura Area). This level is below the EU-27 estimated* average[1] of 1.97 kgs/ha UAA (*based on 2024 usage data – *note that usage volumes in some smaller Member States were not reported due to being categorised as confidential*). It also compares favourably to the OECD average[2] of 0.93kgs/ha UAA (*most recent data available 2016)*.

Harmonised Risk Indicators

In 2019, Commission Directive (EU) 2019/782[3] establishing Harmonised Risk Indicators (HRI's) was adopted with the intention to estimate the trends in risk from pesticide use in the European Union (EU). Further details on the establishment of harmonised risk indicators can be found here: European Commission - Harmonised Risk Indicators.

Harmonised Risk Indicator 1

HRI 1 is calculated using the quantities of pesticide active substances that are placed on the market with a weighting applied based on the categorisation of the active substance in accordance with Regulation EC No 1107/2009[4].

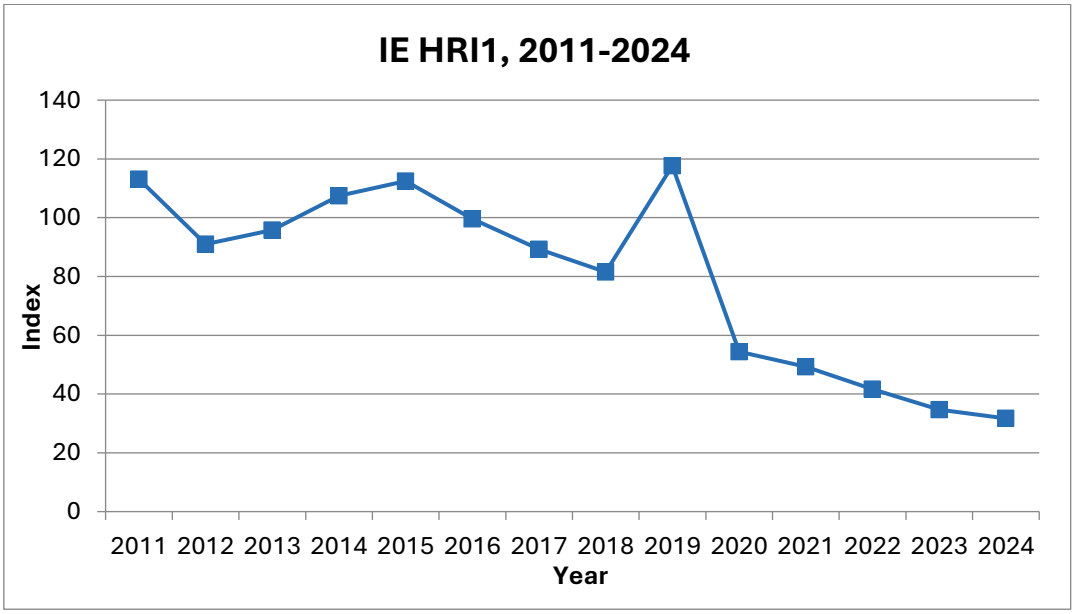

Figure 1. HRI 1 trendline for the years 2011-2024. Baseline = 100 *(average for the period 2011-2013)*

The trendline in Figure 1 generally aligns with the trends for groups 2, 3 and 4 shown in Figure 2 below. A decline was observed for 2016, 2017, and 2018 reflecting overall reductions in the quantities of pesticides placed on the market during these years, with a particular decrease in group 4 substances in 2017 and 2018.

In 2020, some active substances were no longer approved at EU level and re-categorized with a transfer from group 2 to group 4. As a result, sales increased in 2019 for these active substances, but decreased in 2020, continuing to decline through 2024 following their removal from the market.

Figure 2 shows the total sales of pesticides for active substances in groups 1-4 for the years 2011-2024. The average sales for the period 2011-2013 are established as the baseline and set at 100.

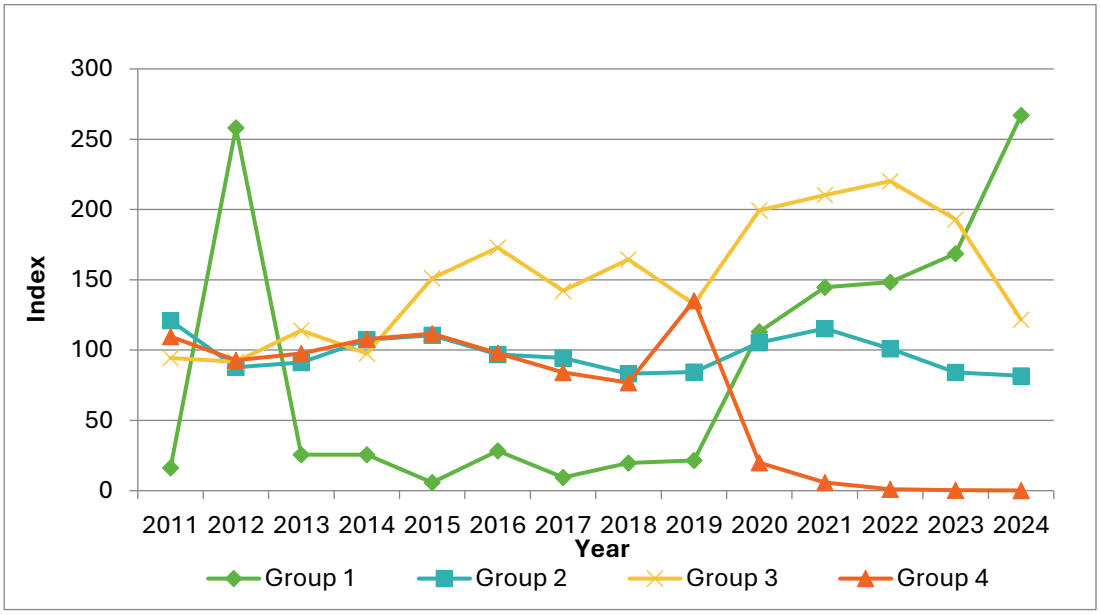

Figure 2. Sales of active substances by group during 2011-2024. Baseline = 100 (*average for the period 2011-2013*)

Group 1 (green): Low-risk active substances

In 2012, there was a significant increase in sales, driven entirely by a surge in sales of ferric phosphate. Likewise, the continued upward trend in group 1 sales in 2020 to 2023 was attributed to increased sales of ferric phosphate. Sales of ferric phosphate decreased by 18% between 2023 and 2024, however increased sales of an attractant product in 2024 contributed to an overall increase in sales in 2024.

Group 2 (blue): Approved active substances not falling into any other category

This group accounts for approximately 89% of the total weight of active substances placed on the market in Ireland and has remained relatively stable over time, aside from a downward trend observed in 2016, 2017 and 2018. Additionally, there was a continued decline in the sales of active substances in group 2 from 2020 to 2024.

Group 3 (yellow): Approved active substances which are candidates for substitution

This group represents less than 12% of the total weight of active substances placed on the market in Ireland. Between 2015 and 2018, there was an overall increase compared to the 2011-2014 period. Although the weight of active substances in this group declined in 2019, a rise in sales was observed in 2020 to 2022. This increase was primarily due to higher sales of the active substance pendimethalin. Between 2023 and 2024, a decrease in the trend for group 3 occurred largely due to lower sales of propyzamide and pendimethalin.

Group 4 (orange): Active substances which are not approved

Thie category represents active substances that are not approved under Regulation EC No 1107/2009[4] and are not listed in the Annex to Implementing Regulation (EU) No 540/2011[5]. However, it is important to note that these active substances were approved at the time of their use but later removed from the Annex or that plant protection products containing such active substances were granted emergency authorisation in subsequent years. The decline observed in 2012 is due to the reduction in the use of the active substance isoproturon. The drop in 2017 and 2018 can be attributed to the non-renewal of linuron and iprodione in 2017. A similar trend is observed from 2019 to 2024, with additional actives such as chlorothalonil and mancozeb also not being renewed.

Harmonised Risk Indicator 2

HRI 2 is calculated by combining the number of emergency authorisations granted in any one year in accordance with Article 53 of Regulation EC No 1107/2009[4]. Emergency authorisations are only granted in specific circumstances for limited and controlled uses.

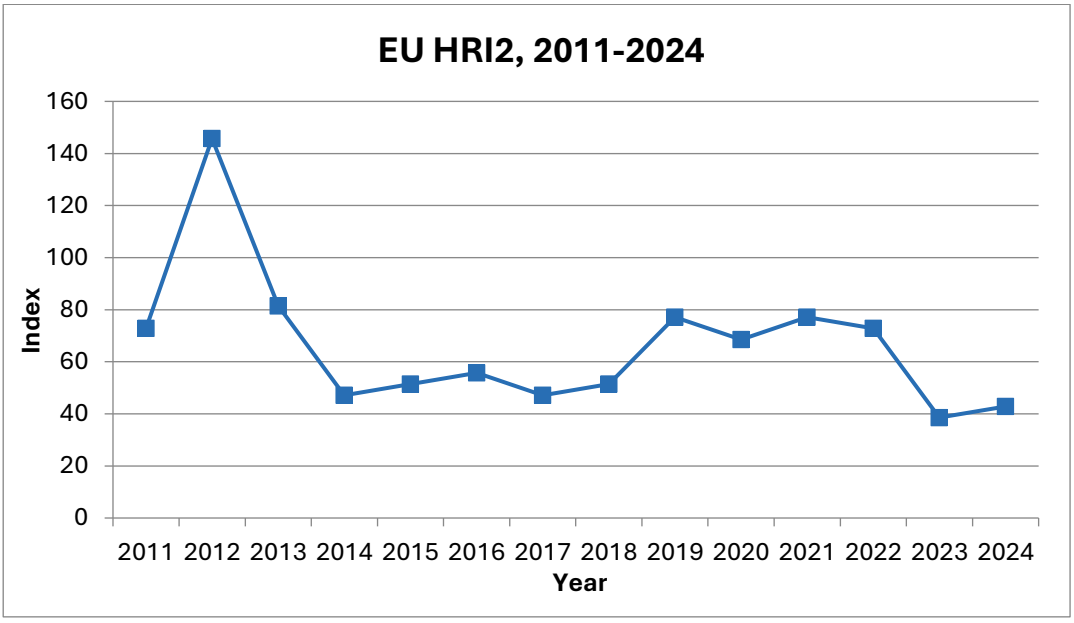

Figure 3. HRI 2 trendline for the years 2011-2024. Baseline = 100 (*average for the period 2011-2013*)

Emergency authorisations are weighted according to the categorisation of the active substance and combined to calculate HRI 2. The trendline for HRI 2 for the year 2011 to 2024 is shown in

Figure 3. In Ireland, the number of emergency authorisations granted annually is low and ranges from two to a maximum of six during the period 2011-2024.

References

[1] Eurostat data collection on sales of pesticides by type of pesticide (weblink) and on utilised agricultural area by categories (weblink).

[2] OECD (2019), Trends and Drivers of Agri-environmental Performance in OECD Countries, OECD Publishing, Paris, https://doi.org/10.1787/b59b1142-en.

[3] Commission Directive (EU) 2019/782 of 15 May 2019 amending Directive 2009/128/EC of the European Parliament and of the Council as regards the establishment of harmonised risk indicators, OJ L 127, 16.5.2019, pp. 4–10.

[4] Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC, OJ L 309, 24.11.2009, pp. 1–50.

[5] Commission Implementing Regulation (EU) No 540/2011 of 25 May 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the list of approved active substances Text with EEA relevance, OJ L 153, 11.6.2011, pp. 1–186.