



EUROPEAN COMMISSION
EUROSTAT

Directorate E: Sectoral and regional statistics
Unit E-1: Agriculture and fisheries

Pesticides statistics and indicators

Report from workshop held on 12 November 2019 European Commission DG ESTAT E1 and DG SANTE F3

1. SETTING

On 12 November 2019, the European Commission Directorate-Generals ESTAT (Eurostat) and Health and Food Safety (DG SANTE) organised a workshop for agricultural statisticians and experts on the sustainable use of pesticides (plant protection products). This was in the framework of meetings of the DG SANTE Working Group on the Sustainable Use of Pesticides, and the Eurostat Working Group on Agro-environmental Statistics. Representatives of the European Commission along with experts from Member States presented the development and the challenges of pesticides statistics and indicators. The Joint Research Centre of the European Commission presented their ongoing work to develop modelling tools to monitor pesticides emissions.

2. BACKGROUND AND POLICY CONTEXT

The EU legislation in force in the area of plant protection products bridges the work of the two Working Groups invited to the workshop. Directive 2009/128/EC on the sustainable use of pesticides, hereinafter referred to as the Sustainable Use Directive (SUD), and the Regulation (EC) No 1185/2009 on pesticide statistics were adopted as part of a broader package on pesticides. The aim of the SUD is to reduce the risks, impacts and dependency of pesticides. The SUD explicitly states that statistics collected under the Regulation (EC) No 1185/2009 shall be used to estimate trends and calculate risk indicators, together with other data.

The plant protection products policy area is high on the agenda for the Commission and other EU institutions. It also generates strong interest in Member States and among the general public. Two EU Citizen Initiatives concerning pesticides and their use are on-going¹.

3. PESTICIDES STATISTICS

3.1. Pesticides sales

Eurostat disseminates statistics on the placing on the market of active substances contained in plant protection products collected from the EU Member States on its website. The available time series starts in 2011 and only high-level aggregates have been disseminated so far due to confidentiality of data, and the obligation to always aggregate the active substances into groups before dissemination. In 2017, Eurostat agreed with Member States to work on disseminating more detailed statistics, and to work on producing EU aggregates of the statistics disseminated. For this purpose, a Confidentiality Charter was put in place with the intention to increase the dissemination potential. In the workshop, Eurostat presented the result of applying the strict rules of the Confidentiality Charter to the statistics of 2016, demonstrating that no further information could be disseminated as a result of applying the rules. The Confidentiality Charter in its current form brings little added value to the dissemination of EU-aggregates of pesticides sales. Member States can propose improvements of the Charter in order to maximize the dissemination of statistics without putting into question the basic statistical confidentiality. In relevant future legal acts, the Commission would favour removing the restriction to aggregate data in a specific way. The Commission considers it important to further adapt the legislation on pesticides sales, so that all data that is not confidential can be made available to the public both as active substances, as well as in different forms of aggregation.

A particular problem that affects pesticides statistics is the requirement to always use kilograms as the reporting unit. Pesticides active substances which are micro-organisms cannot easily be expressed in kilograms, and are more commonly expressed in colony forming units (cfus) or international units. Eurostat contracted a study to review the available information on which practices countries have adopted to tackle these problems². The sharing of best practices can help and the report from the study gave some tips to guide countries on conversion factors. Slovakia followed up by presenting the way they convert these active substances into weight units i.e. cfus into kgs for each pesticide, as these conversion factors are product, rather than active substance, specific. There are no EU-wide agreed conversion factors. Labelling of these plant protection products with the relevant conversion factor could help Member States to report the sales of these products in kgs. Proposals from earlier discussions included reporting the use of micro-organisms active substances as “treated area”, which is not possible under the present legal framework on pesticide statistics, but could be a possibility for the future. Under the current legal framework, the only reporting unit possible is kilogram and future

¹ <https://ec.europa.eu/citizens-initiative/public/initiatives/open>

² GOPA 2019. Reporting micro-organism pesticides <https://ec.europa.eu/eurostat/web/agriculture/agri-environmental-indicators/projects>

reporting units should be thoroughly discussed and defined when drafting new legal acts. Eurostat will continue this work with Member States and stakeholders.

3.2. Pesticides use in agriculture

Member States transmit statistics on the pesticides use in agriculture every five years to Eurostat. The first transmission took place in 2015. The wide variety in crops and reference periods chosen by countries seriously impaired the necessary aggregation of data before publication by Eurostat. Therefore, Eurostat is not ready to start regular dissemination of statistics on pesticide use but has chosen to publish a selection of the data transmitted to Eurostat on the volume of pesticides used in the form of a research paper³. A greater harmonisation of surveyed crops, and of reference years, would improve the usefulness of these data, in particular for developing harmonised risk indicators. To achieve this, the European Commission proposed a voluntary harmonisation of the crops on which countries would report pesticide use, which would be implemented for the reporting period 2020-2024. The crops would cover the main crop groups, i.e. cereals, permanent crops, vegetables, industrial crops and root crops. If possible, a common reference year could be identified.

In several countries, farms working under organic production rules were also included in the sample used for the pesticide use surveys. This is an issue to keep in mind and possibly further discuss, since organic farms have access only to a reduced set of pesticide active substances, which might “dilute” the results of the conventional farms’ use volumes.

A harmonised crop proposal was discussed and generally welcomed by the participants of the workshop. The main crops proposed are widely grown, although not to a significant degree in all countries due to the different agriculture across the EU. However, in order to produce comparable European statistics, a minimum level of harmonisation is necessary. Experience shows that countries already survey these crops to a high degree. In addition, all Member States are free to survey all crops of national interest and transmit the data to Eurostat. Crops of national interest could include crops where active substances of concern are used or crops important in the national agriculture where reductions in dependency on pesticides are especially sought (crops with large surfaces and / or intensive use of pesticides). For crops grown both outdoor and under glass or permanent cover, the outdoor crops are generally more important to survey. Annual surveys are not possible for many countries, and achieving a common reference period in the short term may not be possible. Eurostat plans to publish a guidance note to countries as a step towards collecting and reporting more harmonised pesticide use statistics.

The participants of the workshop were asked to comment on the relationship between sales of active substances used in plant protection products, and their use in agriculture. In some countries, at least 20% of the volumes of active substances sold are used outside of agriculture (in urban areas, roads/railroads, or in private gardens or golf courses).

³ Eurostat 2019. Statistics on agricultural use of pesticides in the European Union <https://ec.europa.eu/eurostat/web/agriculture/agri-environmental-indicators/information>

4. PESTICIDES RISK INDICATORS

4.1. Harmonised risk indicators – first impressions

The European Commission recently adopted harmonised risk indicators for pesticides⁴ (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). The SUD stipulates that the Commission shall calculate risk indicators, and in particular use statistics and other data in order to estimate trends in risk from pesticides use. The Member States shall publish the trends in the harmonised risk indicators on their national websites. The first batch of harmonised risk indicators have been calculated by the Commission and by the Member States⁵. The harmonised risk indicators adopted by the Commission in 2019 should complement indicators developed at national level.

In the workshop, two Member States, Ireland and Germany, shared their experiences with producing the harmonised risk indicators. On the positive side, the countries reported that the indicators were rather easy to calculate, using the tools made available by Eurostat. On the other hand, the policy weightings allocated to the groups and categories of active substances should be replaced by weightings that better represent the hazard properties of active substances. However, the overall trend of sales of weighted active substances was easy to follow even if the interpretation must be done carefully.

4.2. Research and modelling

The Joint Research Centre (JRC) of the European Commission presented ongoing work regarding pesticide emissions to soil and water. The quantification of emissions are hindered by the lack of data, and therefore models are under development. The models must be developed based on pesticides sales and/or use data, and can only cover the substances they are validated for. Application rates of pesticides are often not known and the models suffer from uncertainty in application area. The modelling output will be emission maps which can be used for prediction of chemical concentrations of individual active substances, as well as the estimation of their cumulative toxicity. The JRC also presented a pilot study of analysing pesticides residues in soil. Results can be used for improving modelling of pesticides' transport in the environment, and also for producing indicators. The work done by the Joint Research Centre to develop the knowledge base for pesticides residues in water and soil was welcomed by the delegates.

5. CONCLUSIONS AND WAY FORWARD

In conclusion, both statistics and indicators will benefit from further improvements. Some important steps have been taken and will be further built upon. The aim of reducing dependency on pesticides remains as a top priority for the Commission. It is challenging to make the necessary data, including statistics, administrative data, and research data, available in a coherent manner. It was clear to all participants that more intensive use of data is foreseen in this field. The cooperation across policy

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019L0782>

⁵ https://ec.europa.eu/food/plant/pesticides/sustainable_use_pesticides/harmonised-risk-indicators_en

fields between the Member States and Commission services must continue in order to improve the availability and quality of the data. Communication of the indicator trends and the identification of underlying reasons also need to be improved.
