

Use of pesticides: comments by Poland

1. List of laws (both domestic and international that are being enforced by Polish Government to regulate the use of pesticides.

In the area of pesticides following regulations are in force:

EU regulations

- Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC (Text with FEA relevance)
- Commission Regulation (EU) 2016/805 of 20 May 2016 amending Annex IV to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards *Streptomyces* K61 (formerly *S. griseoviridis*), *Candida oleophila* strain O, FEN 560 (also called fenugreek or fenugreek seed powder), methyl decanoate (CAS 110-42-9), methyl octanoate (CAS 111-11-5) and terpenoid blend QRD 460 (Text with EEA relevance)
- Commission Implementing Regulation (EU) No 400/2014 of 22 April 2014 concerning a coordinated multiannual control programme of the Union for 2015, 2016 and 2017 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin (Text with EEA relevance)
- Commission Implementing Regulation (EU) 2015/595 of 15 April 2015 concerning a coordinated multiannual control programme of the Union for 2016, 2017 and 2018 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin (Text with EEA relevance)
- Commission Implementing Regulation (EU) 2016/662 of 1 April 2016 concerning a coordinated multiannual control programme of the Union for 2017, 2018 and 2019 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin (Text with EEA relevance)
- Commission Regulation (EU) 2016/1002 of 17 June 2016 amending Annexes II, III and V to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for AMTT, diquat, dodine, glufosinate and tritosulfuron in or on certain products (Text with EEA relevance)
- Commission Regulation (EU) 2016/1003 of 17 June 2016 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for abamectin, acequinocyl, acetarniprid, benzovindiflupyr, bromoxynil, fludioxonil, fluopicolide, fosetyl, mepiquat, proquinazid, propamocarb, prohexadione and tebuconazole in or on certain products (Text with EEA relevance)

- Commission Regulation (EU) 2016/1015 of 17 June 2016 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for 1-naphthylacetamide, 1-naphthylacetic acid, chloridazon, fluazifop-P, fuberidazole, mepiquat and tralkoxydim in or on certain products (Text with EEA relevance)
- Commission Regulation (EU) 2016/1016 of 17 June 2016 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for ethofumesate, etoxazole, fenamidone, fluoxastrobin and flurtamone in or on certain products (Text with EEA relevance)
- Commission Regulation (EU) 2016/1726 of 27 September 2016 amending Annex IV to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards carvone, diammonium phosphate, *Saccharomyces cerevisiae* strain LAS02 and whey (Text with EEA relevance)
- Commission Regulation (EU) 2016/1785 of 7 October 2016 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for cymoxanil, phosphane and phosphide salts and sodium 5-nitroguaiacolate, sodium o-nitrophenolate and sodium p-nitrophenolate in or on certain products (Text with EEA relevance)

Polish regulations

- Regulation of the Ministry of Health of 17 October 2007 on sampling food for the measuring of pesticide residues (Dz. U. No 207, 1502).

Additional commentary:

In Poland, for many years the application of plant protection products has been covered by legal regulations aimed at limiting the risk related to use of ppp and protecting human health (both health of the consumer of agricultural crops and of the operator applying these products) and the environment. An essential element of these regulations is the promotion of integrated pest management combining various techniques of preventing the occurrence and eradicating organisms harmful to plants in order to limit the application of chemicals.

Currently, the application of plant protection products in Poland is governed by the Act of 8 March 2003 on plant protection products, compliant with the provisions of the Directive of the European Parliament and of the Council 2009/128/EC of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides and the provisions of the Regulation of the European Parliament and of the Council (EC) No 1107/2009 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.

National legal regulations, regarding the application of plant protection products are available on the Ministry of Agriculture and Rural Development website <https://bip.minrol.gov.pl/Informacje-Branzowe/Produkcja-Roslinna/Ochrona-Roslin/Przepisy-dotyczace-ochrony-roslin>

Official controls on the use of plant protection products are carried out in Poland by the State Plant Health and Seed Inspection Service. The Inspection carries out controls on farms, inter alia, with respect to the possible use of plant protection products not authorised to trading, and contrary to the label, as well as controls of the conditions for safe storage and use of these preparations. The control also covers checks of whether the person carrying out the treatment has a required

certificate of completion of the relevant training as well as storage space of the holder of land, where plant protection products are used and records of treatments.

Moreover, Poland is a party to the Stockholm Convention on persistent organic pollutants (among them some out of use pesticides) and fulfills its provisions. A legal act implements the Stockholm Convention's provisions to European Union law is regulation (EC) No 850/2004/WE of the European Parliament and the Council of 29 April 2004 on persistent organic pollutants and amending directive 79/117/EEC (Official Journal EC L 158, 30.04.2004, p. 7, as amended), which is in force directly.

2. What are the successful and unsuccessful measures taken by your Government to prohibit, ban, restrict and phase out pesticides that are harmful to the health?

The State Sanitary Inspection (SSI) annually prepares and implements consolidated " Plan of sampling for testing food as part of official control and monitoring." This plan includes food testing for pesticides residues through the official controlling and monitoring of non-animal origin food manufactured and placed on the market and all foodstuffs at the retail trade.

Official control and monitoring of pesticide residues in food is conducted in accordance with the provisions of national and European law, especially *Regulation (EC) no 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC.*

The most important factors taken into account when developing the "Plan of sampling for testing food as part of official control and monitoring" in relation to pesticide residues are as follows:

- The applicable legislation on food safety,
- Notifications in the Rapid Alert System for Food and Feed (RASFF),
- Available results of the official food controls and monitoring from previous years in Poland and the European Union,
- Specific food intake in Poland with regard to the number of consumers in particular provinces,
- Scientific data, including the results of monitoring studies and information resulting from cooperation with the European Reference Laboratories and EFSA.

3. Please explain the efforts undertaken by your Government to prevent and mitigate detrimental impacts of pesticides on the health of the vulnerable groups

The procedure of active substances authorization in the EU is preceded by the comprehensive risk assessment. The toxicological reference values (TRVs) used for both pre- and post-registration pesticide risk assessment, namely Acceptable Daily Intake (ADI), Acute Reference Dose (ARfD) and Acceptable (Operator Exposure Level (AOEL) are derived from results of a wide range of *in vitro* and *in vivo* toxicological studies specified by the EU legislation. TRVs include an embedded uncertainty factors, usually of 100, covering intra- and inter-species toxicokinetic and toxicodynamic differences. In fact these TRVs are being established for average representatives of general population and are used worldwide for risk assessment purposes. Until now there is no commonly accepted approach on how to establish separate TRVs intended for risk assessment for especially vulnerable subpopulations like breastfed

infants, children, pregnant and lactating women, elderly people etc.

However, it should be underlined that the worst case exposure scenarios (even applying unrealistic assumptions) for adults and children are used in the pre-registration risk assessment that ensure the widest possible margin of safety. They are applied for dietary exposure estimation of pesticide residues present in food available on the market for operator's occupational exposure as well as for bystanders and residents exposed by any relevant route. Therefore it may be considered that the use of chemical plant protection in accordance with good agricultural practice (GAP), including strict adherence to safety standards by the operator farmer, is by default not associated with any adverse health effects for humans. Similarly, the process of national registration of plant protection products, coordinated by the Ministry of Agriculture and Rural Development (MARD), carried out in accordance with the standards applicable in the EU guarantees to minimize the risks associated with their use.

In Poland the supervision of the proper regulatory compliance in the use of plant protection products is under auspices of State Plant Health and Seed Inspection Service (SPHSIS) subordinated to the MARD. Surveillance performed by this authority refers to the raw agricultural commodities (RACs) from domestic crops. The State Sanitary Inspection (SSI) subordinated to the Minister of Health (MH) is responsible for monitoring and official control intended to enforce compliance with legally binding Maximum Residue Levels (MRLs) in food products (both domestic and imported) available on the market. Results obtained by the latter authority are annually reported to the European Food Safety Authority.

In case when MRL non-compliance is found, an assessment of potential risk associated with residue intake is performed. Depending on the risk assessment output, The Chief Sanitary Inspector (CSI) undertakes follow-up actions aiming to withdraw product from the market provided that it was not sold out before the laboratory issued the final analytical report. In justified cases the CST transmits a relevant notification to the European Rapid Alert System for Food and Feed (RASFF) system that has been established to protect consumers and to respond quickly to any potential concerns regarding food and feed safety.

It can be concluded that the activities regarding the safe use of pesticides and associated food safety carried out by the government entities responsible for risk management and other involved institutions, implemented in accordance with EU legislation, ensure a high level of protection against adverse effects of pesticides on human health.

4. Have any studies been conducted, with the support of your Government, using disaggregated data to differentiate and detect impacts in the vulnerable groups?

Such studies are surely performed by the universities and/or research institutes in frame of their scientific activities. The example may be research concerning consumer risk assessment associated with intake of pesticide residues in food of plant origin from the retail market in Poland recently finished by the Department of Toxicology and Risk Assessment of the National Institute of Public Health — National Institute of Hygiene in Warsaw. The aim of the study was to characterize short- and long-term risk for consumers associated with dietary intake of pesticide residues in fruits, vegetables, and other foodstuffs available on the Polish market based on 2010-2013 official surveillance results. In this study, apart from average consumption data of the Polish general population, the German model for pesticide residue intake

calculations (BfR 2011) that includes consumption data from children aged 2-4 years (bw 16.15 kg) was used since there is no corresponding official information for Poland. However, as mentioned above, TRVs established for general population were used for risk characterization purposes.

- 6. Please provide any good practices that your government has initiated to assess, monitor, prevent and mitigate the risks of exposure to hazardous pesticides, and what further efforts could be undertaken.**

The monitoring of the chemistry of Poland's arable soils is conducted in the framework of the State Environmental Monitoring. The national network consists of 216 monitoring sites located on the arable soils within the territory of the entire country and the research are conducted every 5 years. In 2015 the research programme was extended by the determination of the pesticides in soil. The results of pesticides determination will be available in April 2017.

Additional information the use of pesticides in Poland.

Ad. 1.

- Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides
- 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
- Regulation (EC) No 1185/2009 of the European Parliament and of the Council of 25 November 2009 concerning statistics on pesticides
- Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC
- Act of 8 March 2013 on plant protection products
- Act of 18 July 2001 – the Water Law
- Act of 16 April 2004 on environmental protection
- Act of 28 July 2005 on health resorts, spas and spa conservation areas and on spa gminas
- Regulation of the Minister of Agriculture and Rural Development of 24 June 2002 on health and safety at the handling and storage of plant protection products and mineral and organic-mineral fertilizers
- annually issued regulation of the Council of Ministers on the program of public statistical surveys for the given year, on the basis of the authorization contained in the Act of 29 June 1995 on public statistics
- Regulation of the Minister of Agriculture and Rural Development of 31 March 2014 on the conditions of use of plant protection products
- Regulation of the Minister of Agriculture and Rural Development of 18 April 2013 on the requirements of the integrated pest management
- Regulation of the Minister of Agriculture and Rural Development of 24 June 2013 on documenting the activities related to the integrated pest production
- Regulation of the Minister of Agriculture and Rural Development of 22 May 2013 on the way of proceeding during using and storage of plant protection products
- Regulation of the Minister of Agriculture and Rural Development of 18 April 2013 on the technical solutions that should be used during aerial spraying
- Regulation of the Minister of Agriculture and Rural Development of 18 December 2013 on requirements concerning technical efficiency of plant protection products application equipment
- Regulation of the Minister of Agriculture and Rural Development of 13 December 2013 on confirming of technical efficiency of plant protection products application equipment
- Regulation of the Minister of Agriculture and Rural Development of 8 May 2013 on training in the field of plant protection products

Ad.2

Registration of Plant Protection Products in Poland is based on common legal regulations of EU and national law, one of the most restrictive on the world. In the EU only 488 active substances are approved to use in plant protection products, but in Poland only 292 are used in plant protection products. According to that, only products including active substances approved by EU are accepted. Moreover the applicant must submit tests, studies and risk assessment confirming that use of the products is safe for human and environment. This documentation is evaluated by national experts the Ministry of Agriculture makes a decision to authorise a product or refuses authorisation. The authorisation and label comprise only safe uses of pesticide with necessary risk mitigation measures.

Ad. 3

According to article 36 paragraph 1 of Act on plant protection products "It is forbidden to apply plant protection products, which are in accordance with the provisions of Regulation No 1272/2008 classified as hazardous to human health, in areas of playgrounds, nurseries, kindergartens, primary schools, hospitals, buffer zones "A" separated in spa areas or in health resort areas, within the meaning of provisions on health resorts, spas and spa conservation areas and spa gminas."

More over paragraph 4 of art. 36 of Act on plant protection products states that: "It is forbidden to use by non-professional users in the form of spray or fumigation, and use for treating seed, of plant protection products classified in accordance with the provisions of Regulation No 1272/2008 to at least one of the following hazard classes and categories:

- 1) acute toxicity category 1, 2 and 3;
- 2) carcinogenic;
- 3) mutagenic effects;
- 4) reproductive toxicity;
- 5) specific target organ toxicity - single exposure (STOT SE) category 1;
- 6) specific target organ toxicity - repeated exposure (STOT RE) category 1.

Provisions of the Act of act on plant protection products introduced the obligation to respect the principles of integrated pest management by all professional users, and so primarily by agricultural producers. Integrated pest management is a way to protect plants against harmful organisms, involving the use of all available methods, in particular non-chemical methods and low risk active substances, so as to minimize risk to human health and the environment. To support agricultural producers in the implementation of this obligation for the Ministry of Agriculture and Rural Development have developed a guidelines of integrated protection for particular crops, which in the electronic version is available on the website of the Ministry of Agriculture and Rural Development.

In addition in the Act on plant protection products imposes the obligation to perform adequate, repeated training for people performing treatments of plant protection products in the areas of agriculture, forestry and in the areas of urban greenery. In contrast, plant protection products designed for professional users may be sold only to persons trained.

Another condition for the use of plant protection products is the duty of evaluating the efficiency of technical equipment intended for use in plant protection products. This obligation is significant, particularly with regard to the effectiveness of procedures performed, the safety of persons carrying out treatments, preventing contamination of the environment and the quality of food and consumer safety, because on the website of the Ministry of Agriculture contains studies which may provide support for users of different types of sprayers.

Controls on compliance with these obligations are carried out by the State Inspectorate of Plant Health and Seed on the basis of a statistical model, the targeting of its activities in the areas of greatest risk of improper use of plant protection products. One of the criteria of planning control is the number of previously detected irregularities in the group cultivation and range of area.

Existing provisions and control measures is to achieve a significant reduction in the harmful effects of these products on human health, animals and the environment. The use of plant protection equipment in good working order by trained personnel reduces the risk of threats to the sprayer operator, bystanders and consumers of agricultural products.

Ad. 5

Directive 2009/128/EC stresses the need to raise awareness among the general public on plant protection products and their role in modern agriculture and the risks that may be associated with their use. In accordance with Article 7 of the Directive, Member States of the European Union should ensure public access to accurate and balanced information on plant protection products.

The implementation of the Polish national action plan includes an information campaign aimed at raising awareness of selected social groups on plant protection products. The campaign includes organization of conferences approximating the scope of the national action plan, and the publication of information in the press and distribution of information material.

General principles of integrated pest management, including the obligations imposed on the users of plant protection products by the provisions of the Act on plant protection products, was included in the curricula of agricultural schools and universities and other higher education institutions that provide education at faculties covering issues related to crop cultivation or protection.

Furthermore, in accordance with the provisions of Article 74 of the Act on plant protection products, the information on minimizing the risks of plant protection products on human health,

animals and the environment is available on the website of the Ministry of Agriculture and Rural Development.

Ad. 6

Safe use of plant protection products is conditional to the greatest degree on awareness, knowledge and skills of people performing chemical treatments, who proceed correctly using appropriate equipment and infrastructure to minimize the risk associated with the use of these preparations. The objective of the task will be to expand existing activities carried out in the interest of safety for all activities related to the use of plant protection products. Good practice relating to protection of the operator, proper preparation of facilities and storage of plant protection products, preparation of the spray liquid and disposal of its remains, treatment technique, bioremediation of chemicals, management of packaging and obsolete pesticides and protection of beneficial organisms will be promoted. At the same time, creating awareness in this regard among the users of pesticides requires conduct of inspection activities by the competent authorities.

Due to the importance of dissemination and promotion of best practices in plant protection to ensure the safe use of plant protection products, at the request of the Ministry of Agriculture and Rural Development in 2012, has been developed guidelines of good plant protection practice, covering issues such as health and safety in the use of protection products, the protection of pollinators during the use of plant protection products, the rules of mixing and the combined use of agrochemicals, agricultural sprayer calibration and the calibration of orchard spraying.

All the above publications are available on the Ministry's website and will be updated with the development of knowledge in this field. They are addressed directly to the farmers and advisors, as well as units engaged in obligatory training for users of plant protection products.

In addition to the activities undertaken at the initiative of the Ministry of Agriculture and Rural Development institutes supervised by the Ministry carry on some activities on their own initiative. For example, implementation of the project TOPPS (Training the Operators to Prevent Pollution from Point Sources) in 15 European countries by 13 organizations and research centers, including by the Institute of Horticulture in 2013. Guidance for the development of good plant protection practice "Preventing water pollution as a result of spray drift of plant protection products".

The Institute of Horticulture, developed:

- two brochures: Good practice of the use of plant protection products and Good plant protection practice as a tool to limit the spray drift - spraying in orchards.
- two leaflets - Proper use of plant protection products guarantee safe food and Safe storage and use of plant protection products.

These publications are available on the website of the Institute of Horticulture: www.inhort.pl

The Ministry is funding the next edition of the multiannual programs (2016-2020) carried out by scientific institutes, including issues related to the safe use of plant protection products.

Ad. 7

As indicated in the answer to question 2, EU law is very restrictive with respect to pesticides. The Ministry actively participates in the work of different EU bodies on pesticides. It is carried out systematically a review of active substances and registered plant protection products. The EU also creates new requirements for registration, such as regulations for endocrine disruptors, basic substances or low risk substances.

Ad. 8

Integrated pest management is a way of protecting plants against harmful organisms, which involves using all available methods of plant protection, in particular non-chemical methods, in a way that minimizes risk to human health, animals and the environment. Integrated pest management uses the full knowledge of organisms harmful to plants (in particular, their biology and harmfulness) in order to determine the optimum time limits for taking action against these organisms, and it uses natural occurrence of natural enemies, including predators and parasites of organisms harmful to plants, and

makes use of their introduction. Thus, the integrated pest management can reduce the use of chemical plant protection products to a minimum.

The obligation to apply the principles of integrated pest management by all professional users of plant protection products as of 1 January 2014 is the result of the provisions of Article 14 of Directive 2009/128/EC and Regulation No 1107/2009. Article 55 of Regulation No 1107/2009 stipulates that plant protection products must be used properly. Proper use of plant protection products is meant to include, among others, compliance with the provisions of Directive 2009/128/EC, and as of January 1, 2014, compliance with the general principles of integrated pest management, as referred to in Article 14 and Annex III of the Directive.

The implementation of integrated pest management include both legislative and nonlegislative measures. Ministry of Agriculture and Rural Development proceeds activities aiming educating and informing people, and providing farmers with the right tools, such as guidelines, including the monitoring of harmful organisms, thresholds of their economic harmfulness and decision support programs in plant protection.

Reducing agriculture's environmental impacts requires a transition towards innovative, low-input systems. Organic production plays a role in increasing the efficiency of nutrient management and reducing pesticide use.

In 2014 the "Framework Action Plan for Food and Organic Farming in Poland for the years 2014 - 2020" has been prepared taking into account the very high importance attached to the development of organic farming in Poland.

The main objective of the "Framework Action Plan" is the development of organic farming and organic food market. The achievement of the main objective will be implemented through activities assigned to the seven specific objectives:

- Increasing the competitiveness of organic farming and increased supply of organic food on the market;
- Stimulating the development of the processing of organic products;
- Diversification and strengthening of distribution channels for organic products;
- Increase the consumers awareness of organic farming and organic food;
- Raising the level of cooperation between stakeholders in the organic sector;
- Coordinating the central and local government institutions in the development of the organic sector.
- Maintaining a high level of control and certification of organic products.

The actions of the Plan mentioned above are taken and implemented by the Ministry of Agriculture and Rural Development, the subordinated or supervised units (e.g. research institutions) in order to achieve the Plan objectives.

The Ministry is also funding research of organic methods of plant protection.