

REPUBLIC OF
BULGARIA
COUNCIL OF
MINISTERS

copy

DECISION No 571
of 13 August 2020

ON THE ADOPTION OF AN UPDATED NATIONAL ACTION PLAN FOR
SUSTAINABLE PESTICIDE USE IN BULGARIA

Pursuant to Article 124(5) of the Plant Protection Act,

THE COUNCIL OF MINISTERS

H A S D E C I D E D A S F O L L O W S :

The updated National Action Plan for Sustainable Pesticide Use in Bulgaria, as per the Annex, is hereby adopted.

PRIME MINISTER:

(signed) Boyko Borisov

SECRETARY-GENERAL OF THE COUNCIL OF MINISTERS:

(signed) Veselin Dakov

Certified true copy,

Director of the Government Office Directorate
Apostol Mihov (signed)

**National Action Plan
for Sustainable Pesticide Use
in the Republic of Bulgaria**

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FOREWORD

The promotion of the sustainable use of pesticides is one of the important actions being undertaken by the EU in support of the achievement of the UN 2030 Agenda for Sustainable Development.

In 2017, the European Commission called on Member States to undertake more actions to ensure that pesticide use is sustainable and does not endanger human health or the environment.

As an EU Member State, Bulgaria continues the policy of effective implementation of sustainable pesticide use aiming at a gradual and constant reduction of the chemical methods used for treatment and their substitution by public health and environmentally friendly alternatives. The results of this approach are: minimised human health risks from pesticide use; stable agro-ecosystems and protection of the environment through long-term sustainable development in the agricultural sector; and more viable agriculture. One of the main methods is integrated pest management, which is based on the optimised use of natural resources and mechanisms for plant and plant product pest control. The economic, environmental and social advantages of non-chemical methods are clear and ensure long-term sustainable farming.

This National Action Plan for Sustainable Pesticide Use was updated with the cooperation of and expert assistance from all responsible State institutions and interested parties, namely plant protection associations and non-governmental organisations. The Bulgarian Food Safety Agency was responsible for the initiation, coordination and overall review of the plan.

The Action Plan sets out the objectives that the State intends to meet in the coming years and the measures they require. A list of indicators will be used to assess progress made in the implementation of these objectives and measures. They pave the way for the development and implementation of techniques that are safe for human health and the environment in the country in the coming years. To this end, the primary objective is to encourage farmers to maintain sustainable pesticide use and/or to make a transition to organic farming.

The successful and effective implementation of this Action Plan will ensure that Bulgaria continues to meet the European Union's ever-increasing requirements for sustainable pesticide use in modern agriculture.

Boyko Borisov

Prime Minister of the Republic of Bulgaria

INTRODUCTION

Directive 2009/128/EU defines a set of actions to achieve sustainable pesticide use in the EU by reducing the risks and impacts of pesticide use on human health and the environment. To this end, Member States adopt National Action Plans aimed at setting their objectives, targets, measures and timetables to reduce risks and impacts of pesticide use on

human health and the environment and at encouraging the development and introduction of integrated pest management and of alternative approaches or techniques in order to reduce dependency on the use of pesticides in agriculture.

In order to transpose the provisions of the Directive into Bulgarian law, a National Action Plan (NAP) of the Republic of Bulgaria was drawn up in 2012.

In order to respond to the fast pace of developments and changes in the national legislation, Bulgaria carried out a review of the National Action Plan. To this effect, pursuant to the requirements of Article 4(2) of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009, an inter-service working group was set up by Order No RD 09-933/6.12.2017 of the Minister for Agriculture, Food and Forestry. The group reported on the implementation of the NAP for the period 2012-2017 and carried out a review.

The National Action Plan for Sustainable Pesticide Use was updated with all responsible State institutions and interested parties co-operating and providing expert assistance. The Action Plan sets out the objectives that the State has worked towards in the last five years and the measures they require. The set quantitative indicators are used to assess progress in the implementation of these objectives and measures. The implementation of the 2018-2022 NAP ensures the sustainable pesticide use in Bulgaria as an EU Member State, by reducing the risks and impacts on human health and the environment.

Although the licensing regime for plant protection products – testing, field trials, laboratory tests, evaluations, data, etc. – ensures that plant protection products that are placed on the market are safe for both humans and the environment, and effective against economically significant pests capable of compromising agricultural crop yields, the Sustainable Use of Pesticides Directive lays down special requirements for Member States with regard to:

- access to initial and additional training for professional users of plant protection products, distributors and advisors and a certification system for individuals possessing the required knowledge;
- sales of pesticides;
- information and awareness programmes relating to pesticides;
- systems for collecting information relating to cases of acute and chronic pesticide poisoning;
- inspection of the equipment used to apply pesticides;
- aerial spraying;
- protection of the aquatic environment and drinking water;
- reduction of pesticide use or risks in specific areas;
- handling of pesticides, their packaging and unused quantities of plant protection products;
- storage of pesticides;
- integrated pest management;
- risk indicators.

This National Action Plan describes the way in which Bulgaria ensures the implementation of the requirements in these fields. It defines the objectives, measures, schedules and indicators for the reduction of the risks and impact of the use of pesticides on human health and the environment. In line with the requirements of the Directive, it sets out

the actions to be undertaken to encourage integrated pest management and alternative approaches or technologies to reduce dependence on pesticide use. The Directive also envisages Member States' monitoring the use of plant protection products containing active substances which give rise to particular concern and the setting of schedules and objectives to cut down on their use, in particular when this represents a suitable way of reducing risk.

In drawing up Bulgaria's National Action Plan, consideration was given to the health, social, economic and ecological impact of the measures envisaged in the Plan, and to specific national and regional conditions.

LIST OF ABBREVIATIONS

International organisations and laws

EFSA	European Food Safety Authority
ISO	International Organisation for Standardisation
RASFF	Rapid Alert System for Food and Feed
ZZR	Plant Protection Act

Ministries and State institutions

BFSA	Bulgarian Food Safety Agency
BD	Basin Directorates at the MOSV
GD GVA	Directorate-General for the Civil Aviation Administration
IA BSA	Bulgarian Accreditation Service Executive Agency
EEA	Environmental Executive Agency
MZ	Ministry of Health
MAFF	Ministry of Agriculture, Food and Forestry
MEW	Ministry of the Environment and Water
MTITS	Ministry of Transport, Information Technologies and Communications
NRL	National Reference Laboratories
RFSD	Regional Food Safety Directorate
RIOSVs	Regional Environmental and Water Inspectorates
CLVSE	Central Laboratory for Veterinary Sanitary Expert Appraisal
CLCTC	Central Laboratory for Chemical Testing and Control
RACFC	Risk Assessment Centre for the Food Chain

Parameters, standards, plans, programmes, etc.

AER	Agroecological area
ARIB	Association for the Plant Protection Industry of Bulgaria
BDS	Bulgarian State Standard
SG	State Gazette
ZZV	Water protection zone
IPM	Integrated pest management
MRL	Maximum residue level
NEM	National Ecological Network
NAP	National Action Plan

EDT	Economic damage threshold
PPP	Plant protection product
RBMP	River basin management plans
POPs	Persistent Organic Pollutants

I. LEGAL BASIS

The National Action Plan for Sustainable Pesticide Use in Bulgaria was drawn up and adopted on the basis of Article 4 of 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 (OJ L 309 of 24 November 2009) and the Plant Protection Act (ZZR).

The National Action Plan for Sustainable Pesticide Use was drawn up in line with other plans and measures that had already been drafted at national level under other EU legislation and national legislation relating to pesticide use:

I. Implementation plans under other Community legislation on pesticides:

- Updated National Action Plan for Management of Persistent Organic Pollutants in the Republic of Bulgaria, 2012-2020 (A-NPDUUOZ), adopted by Decision of the Council of Ministers of 5 September 2012
- River basin management plans (Danube, Black Sea, Eastern Aegean and Western Aegean basins)

II. Other main acts in European and national legislation linked to sustainable pesticide use:

- 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
- 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
- Commission Implementing Regulation (EU) 2015/408 of 11 March 2015 on implementing Article 80(7) of Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market and establishing a list of candidates for substitution
- Commission Regulation (EU) No 283/2013 of 1 March 2013 setting out the data requirements for active substances, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market.
- Commission Regulation (EU) No 284/2013 of 1 March 2013 setting out the data requirements for plant protection products, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market
- Commission Regulation (EU) No 546/2011 of 10 June 2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards uniform principles for evaluation and authorisation of plant protection products
- Commission Regulation (EU) No 547/2011 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards labelling requirements for plant protection products
- Commission Implementing Regulation (EU) 2018/555 of 9 April 2018 concerning a coordinated multiannual control programme of the Union for 2019, 2020 and 2021 to ensure compliance with maximum levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin
- Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC

- Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- Council Regulation (EC) No 3922/91 of 16 December 1991 on the harmonisation of technical requirements and administrative procedures in the field of civil aviation
- Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks
- Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC)
- Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council
- Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
- Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy
- Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council
- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption
- Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral water
- Directive 2008/98 of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives
- Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

- Directive 2004/37/EC of the European Parliament and of the Council of 29 April 2004 on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
- Foods Act
- Animal Feed Act
- Health Act
- Healthy and Safe Conditions at Work Act
- Environmental Protection Act
- Water Act
- Soil Act
- Biodiversity Act
- Protected Territories Act
- Harmful Exposure to Chemicals and Mixtures Protection Act
- Waste Management Act
- Agricultural and Forestry Equipment Registration and Control Act
- Civil Aviation Act
- Urban Development Act
- Plant Protection Act
- Regulation No 104/2006 on controls on the marketing and use of plant protection products (published in SG No 81/2006)
- Regulation No 11/1995 on sanitary/health requirements for the structure and operation of agricultural pharmacies (published in SG No 37/1995)
- Regulation No 3/2017 on the conditions and procedure for the manufacture, placing on the market, marketing, repackaging and storage of plant protection products (published in SG No 64/2017)
- Regulation No 112/2006 on the specific requirements for the fumigation and decontamination of areas, premises and plant products to combat pests (published in SG No 87/2006)
- Regulation No 15/2007 on the conditions and procedure for integrated production of plants and plant products and their marking (published in SG No 66/2007)
- Regulation No 13/2016 on measures to protect honey bees and honey bee swarms from poisoning and ways to carry out plant protection, disinfection and insecticidal activities (published in SG 70/2016)
- Regulation No 2/2015 on standards for maximum permitted levels of pesticide residues in and on food (published SG No 9/2015)
- Regulation No 119/2006 on the measures for monitoring certain substances and residues thereof in live animals, raw materials and food of animal origin intended for human consumption (published SG No 6/2007)
- Regulation No 3/2008 on the limit values for harmful substances in soil (published in SG No 71/2008)
- Regulation No 1/2011 on water monitoring (published in SG No 34/2011)

- Regulation on environmental quality standards for priority substances and certain other pollutants (adopted by Ministerial Decree No 256 of 1 November 2010, published in SG No 88/2010)
- Regulation No 9/2001 on the quality of water intended for drinking and household use (published in SG No 30/2001)
- Regulation No 12 on quality requirements for surface water intended for drinking and household use (published in SG No 63/2002)
- Regulation No 4/2011 on classification of surface water (published in SG No 22/2011)
- Regulation No 3/2000 on the conditions and procedure for the study, design, approval and exploitation of safeguard zones around water sources and equipment for drinking and household water supply and near sources of mineral waters used for therapeutic, prophylactic, drinking and hygiene purposes (published in SG No 88/2000)
- Regulation No 1/2007 on the exploration, use and protection of groundwater (published in SG No 87/2007)
- Regulation No 3 on mandatory preliminary and routine medical checks for employees (published in SG No 16/1987)
- Regulation No 37/2016 on aircraft operators (published in SG No 87/2016)
- Regulation No 2/2014 on the classification of waste (published in SG No 66/2014)
- Regulation No 14/2016 on the protection of plants and plant products from economically significant pests (published SG No 77/2016)
- Regulation on the procedure and storage of hazardous chemical substances and mixtures (adopted by Ministers Decree No 152/2011, published in SG No 43/2011)
- Regulation No 5/2016 on periodic inspections of application equipment for plant protection products (published in SG 11/2016)

II. COMPETENT AUTHORITIES

THE BULGARIAN FOOD SAFETY AGENCY (BFSA) is a single authority that controls the quality and safety of foods and animal and plant health in Bulgaria. Established at the beginning of 2011, the BFSA follows the best European practices in implementing high standards of controls in the areas of quality and safety of food, plant protection products and fertilisers, etc. The BFSA sets the requirements for plant protection products and fertilisers, the testing regime, the authorisation and control of manufacturing, repackaging, storage, placing on the market and use and performs official controls to protect human and animal health and the environment. It monitors pesticide residues in raw materials and food of plant or animal origin and animal feed and implements on an annual basis a national control programme for pesticide residues in or on food of plant or animal origin. It monitors the marketing and use of plant protection products in line with the single multi-annual national control plan. The main objective of monitoring the marketing, storage, repackaging and use of plant protection products is to ensure the safety of food of plant origin.

The BFSA **Plant Protection Products and Fertilisers Directorate** is responsible for the methodological guidance and coordination of the actions of the regional food safety directorates in the sphere of plant protection with regard to plant protection products and fertilisers. It manages and coordinates the authorisation to place on the market and use plant protection products. The Directorate organises, manages and controls the biological testing for efficacy and for residue levels of plant protection products at BFSA offices and at authorised offices of natural and legal persons, in compliance with the principles of good experimental

practice. It checks whether plant protection products conform to the indicators approved at the time of authorisation. It compiles and updates lists of authorisations to place on the market and use plant protection products and registered fertilisers, soil amelioration agents, biologically active substances and nutritional substrates. It manages and coordinates the actions of regional food safety directorates in implementing control of the placement on the market, marketing and use of plant protection products and fertilisers. It keeps registers of authorisations for marketing plant protection products, repackaging plant protection products and providing specialist plant protection services. It also manages and coordinates control measures for compliance of the use of plant protection products with the principles of Good Plant Protection Practice and integrated pest management, in line with the requirements of the Plant Protection Act and in order to achieve sustainable pesticide use.

Regional Food Safety Directorates (RFSDs) at the BFSA. The BFSA has 28 regional directorates which carry out their activities in the relevant regions. Their directors issue licences for the marketing and repackaging of plant protection products; certificates under Article 83 ZZR; authorisations for aerial spraying of plants and plant products; orders to record in the fumigation register plants, plant products, etc. and decontamination of seeds as plant protection services and advisory services.

Inspectors from the plant protection units at the BFSA regional directorates monitor plant protection products and fertilisers on the market and their use; implement national plans for control and use of PPPs and a control programme for pesticide residues in food; carry out planned checks and checks following warnings/complaints, etc.

The Central Laboratory for Chemical Testing and Control (CLCTC) is a legal entity at “(sic) under Article 8(2) of the Bulgarian Food Safety Agency Act and Article 43 of the Rules of Procedure of the Bulgarian Food Safety Agency. It was set up in 1966 as a source of information for greenhouse production in Bulgaria, and since 1986, by Decision of the Council of Ministers, it has been authorised to monitor harmful chemicals in plant produce and the quality of agrochemicals. The laboratory works in a number of different areas, and it monitors both products intended for agricultural use (pesticides and fertilisers) and raw materials and food of plant origin. Its main task is to monitor pollutants in food of non-animal origin. Analyses are carried out at the Laboratory, in accordance with the existing regulations, to identify pesticide residues, mycotoxins and environmental pollutants, plant protection products, mineral and organic fertilisers, local production and imports, in order to check conformity with the physical and chemical indicators. The laboratory carries out tests for:

- Pesticide residues in: vegetables and fruit – fresh, frozen or dried and processed products; cereals (grains) and processed products; tea, herbs and seasonings; wine.
- Mycotoxins in: nuts, dried fruit and processed products; cereals (grains) and processed products; roasted coffee, instant coffee, green coffee, cocoa and cocoa products; tea, herbs and seasonings, juices, nectars and fruit-based concentrates, pectin.
- Elemental analysis of: vegetables and fruit – fresh, frozen or dried and processed products; tea, herbs and seasonings; cereals (grains) and processed products; beers and wines.
- Nitrates in: vegetables and fruit – fresh or frozen and processed products; processed cereal-based food and food intended for infants and small children.
- Physical and chemical analyses of: inorganic straight fertilisers; inorganic compound fertilisers; inorganic liquid fertilisers.
- Compliance of active bases in plant protection products.

The Central Laboratory for Chemical Testing and Control has an established and functioning Quality Control System and is accredited for all its activities by the Bulgarian

Accreditation Service Executive Agency in line with the requirements of Bulgarian State Standard EN ISO/IEC 17025.

By Order of the Minister for Agriculture, Food and Forestry, the laboratory was designated the National Reference Laboratory that is responsible for carrying out analyses of pesticide residues in fruit and vegetables.

The laboratory employs highly skilled experts, which enables it to apply European standards in its activities.

Since 1990 the Laboratory has been continuously upgrading its conventional and analytical equipment, and it now has modern equipment for analyses in its field: GC, GC/MS/MS, HPLC, AAS, ICP and others.

The Risk Assessment Centre for the Food Chain (RACFC) is a structure that carries out scientific risk assessment in the food chain through an independent, transparent and impartial analysis of scientific information on issues that directly or indirectly affect the health of animals and plants, plant and animal products, plant and animal reproductive material, and food and feed safety. Scientific assessment is carried out at the request of State agencies and natural persons and legal entities, or at the request of the European Food Safety Authority (EFSA). The Centre approves, renews and reviews the approval of active substances, safeners and synergists and assesses plant protection products for authorisation, renewal, amendment or withdrawal of an authorisation for the placing on the market and use of plant protection products under the terms and procedure laid down in Regulation (EC) No 1107/2009. The Centre's activities are aimed at informing the public of any risks and hazards caused by the incorrect use of plant protection products, and of potentially increased levels of pesticide residues in food.

THE MINISTRY OF AGRICULTURE, FOOD AND FORESTRY (MAFF) implements national policy for the development of crop and livestock farming and associated activities; is responsible for the national policy in the areas of: cereal crop cultivation, trade in and storage of cereals and cereal processing; the production, trade in and use of animal feed; implements the national policy with regard to control of food of plant and animal origin, raw materials, animal by-products and products obtained from them, and specific plant products. It monitors the compliance with the requirements applicable to food and the measures and conditions to ensure that food is hygienic and safe for human health and the environment; organises, coordinates and monitors activities associated with the preservation of agricultural land and forests; implements the policy on financing agricultural and rural projects and programmes from the state budget via special funds and via European Union (EU) funds; organises, coordinates and monitors activities associated with the implementation of the common agricultural policy (CAP) and the EU's food safety policy, etc.

The **Crop Cultivation Directorate** supports the Minister in carrying out and implementing the national and European Union plant production policy; draws up strategies, action plans, implementation evaluations and other programming documents related to the development of crop cultivation; Coordinates agricultural crop surveillance to establish the current status of the crops in respect of agroclimatic conditions and drafts an analytical report on the results.

The **Organic Production Directorate** assists the Minister in the implementation of the EU and the national policies on organic production, supervision and control; draws up strategies, action plans, implementation evaluations and other programming documents related to organic production; in its capacity as a competent authority, organises the application, supervision and control of the rules for organic production of agricultural products and

foodstuffs pursuant to Council Regulation (EC) No 834/2007 of 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91 and Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control; draws up annual reports to the European Commission and reports statistical information, in accordance with Regulation (EC) No 834/2007.

The **General Directorate for Agriculture and Regional Policy** organises and performs the type approval activities under the Act on the registration and inspection of agricultural and forestry machinery and the type approval of internal combustion engines for non-road machinery as regards pollutant emissions; organises and carries out supervision and inspection activities under Article 15(2) of that Act; organises the registering of qualifying training courses for equipment operators under that Act; organises the issuing and renewal of licences to operate equipment under that Act and maintains a register of licences; sets up and maintains a national public electronic register for the registration, reporting and inspection of equipment and persons qualified to operate it; of EU type-approval certificates or national type-approvals issued; of persons authorised to conduct theoretical and practical training of applicants for the acquisition of qualifications to operate the machinery and instructors carrying out the training of candidates for the acquisition of qualifications to operate the machinery. The General Directorate for Agriculture and Regional Policy, through the territorial units Testing and Certification Centre Plovdiv and Testing and Certification Centre Ruse certifies the safety of the equipment used under that Act; tests, certifies and assesses the conformity of new equipment under that Act; carries out periodic inspections of the equipment used to apply pesticides; in cooperation with the Agricultural Statistics Unit, it processes and analyses statistical data on the use of plant protection products.

The **Food Chain Policies Directorate** supports the Minister in drafting, coordinating and applying the State policy in the sphere of food quality and safety and the safety of animal feed, animal and plant health, and plant reproductive material; coordinates the drawing up of a single multiannual national control plan pursuant to Article 41 of Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law and animal health and animal welfare rules, and of an annual report on the implementation of the single multiannual national control plan; is the national contact point of the Codex Alimentarius and it coordinates the effective functioning of Codex Alimentarius activities in Bulgaria; sets up and maintains the rapid alert system for food and feed (RASFF) in Bulgaria and acts as the national contact point for the system; takes part in joint actions with the European Food Safety Authority (EFSA), the World Health Organisation, the Food and Agriculture Organisation, the Codex Alimentarius, the World Organisation for Animal Health and other international organisations for food and feed safety, animal health and animal welfare, plant health and plant reproductive material.

THE MINISTRY OF THE ENVIRONMENT AND WATER (MEW) manages, coordinates and monitors the drafting and implementation of State policy in the field of environmental protection and water protection and use. The Ministry, through the regional environmental and water inspectorates and the Environmental Executive Agency, controls and monitors the pollution of environmental compartments (air, soil, surface and groundwater) with chemical pollutants.

The **Water Management Directorate** implements the State policy for water management, develops national programmes on water protection and sustainable development. organises and manages water monitoring; drafts the State policy on bilateral and multilateral cooperation on water use and protection; defines safeguard zones: for water abstraction facilities for mineral water, for water abstraction facilities located in national parks; monitors

compliance with the prohibitions and restrictions introduced by the Protected Areas Act, management plans and designating orders, monitors and controls the environmental compartments and factors; monitors dam complexes and major dams used for drinking and household water supply; sets up a list of priority substances and priority hazardous substances; adopts methodologies for testing water in cases where Bulgarian standards are not available and for analysing the water monitoring data.

The **National Nature Protection Service** drafts regulations on nature protection; launches procedures for the designation of and changes to protected areas and protected zones; launches procedures for the award, adoption or approval of management plans for protected areas and protected zones; launches procedures for the award and approval of action plans for plant and animal species; develops and coordinates verification of compliance with, sustainable use of and the restoration of the functions of the restrictive regimes for vulnerable biological resources; collects, continuously updates and stores data relating to the national ecological network and prepares specialist maps, registers and an information system based on these data; provides methodological support for the activities of the regional agencies relating to the monitoring of protected areas and zones and biological diversity; and liaises with other authorities and organisations and coordinates with them on issues concerning protected areas and zones and the protection of biodiversity.

Through the directors of the national park directorates, the Minister for the Environment and Water monitors compliance with the prohibitions and restrictions in safeguard zones within national parks. The Minister also supervises and monitors environmental compartments and factors that have an impact on the state of waters.

The **Waste Management and Soil Protection Directorate** manages, coordinates and monitors the preparation and implementation of State policy on waste management, including hazardous waste, and soil protection.

The **Clean Air Directorate** organises the development of ambient air quality (AAQ) standards and alert thresholds for informing the public, standards for the content of harmful substances in fuels and the associated technical and qualitative requirements and the emission limit values for harmful substances released into the air from stationary sources. It coordinates the standard compliance control activities and the annual inventories by the CLRTAP and of ozone-depleting substances; evaluates projects related to the substitution of ozone-depleting substances and carries out checks to ensure the quality of the greenhouse gas inventory data.

The **Environmental Assessment, Environmental Impact Assessment and Pollution Prevention Directorate** implements the policy of assessing the impact of plans and programmes on the environment and human health, including conducting and coordinating the procedures for environmental impact assessment (EIA) of investment proposals falling within the remit of the Ministry, as well as coordination of the compatibility assessment where joint EIA procedures are conducted under Article 31 of the Biodiversity Act. It

supports the control of decisions issued, conducts environmental assessment procedures of plans and programmes, implementation of international instruments (conventions) in the field of chemicals management related to the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides In International Trade, persistent organic pollutants, mercury, transboundary effects of industrial accidents. It participates in the drawing up of proposals for the assessment of substances, the identification of particularly hazardous substances for authorisation, restricts of chemicals and harmonises the classification and labelling of the substances, implements measures concerning the import and export of hazardous chemicals and, provides information to the public on chemical risks and how to use chemicals safely.

The **Ministry** carries out its actions at national and regional level through the **Environmental Executive Agency (EEA)**, the **16 Regional Environmental and Water Inspectorates (RIOSV)** and the **4 Basin Directorates (BD)**.

The **Environmental Executive Agency (EEA)** is part of the Ministry of the Environment and Water and has management, coordination and information functions in the area of environmental monitoring and protection, and draws up and manages the National Environmental Monitoring System and provides information on the status of environmental compartments and factors throughout the country. It is the national reference centre for the European Environment Agency (EEA).

Through the Environmental Executive Agency, the Ministry of the Environment and Water carries out laboratory tests and on-the-spot test to determine the water status; conducts water monitoring at national level; maintains a national geographic information system for water; prepares an annual report on the water status; issues regular bulletins on the state of water resources in Bulgaria based on data from the monitoring of the ecological and chemical status of water; creates and maintains specialist databases, maps, registers and a water information system.

The **Environmental Monitoring and Assessment Directorate** has numerous functions, including administration of the National Environmental Monitoring System; carries out analyses and assessments of the state of the environment by compartment and by factor; draws up national representative information on the state of the environment and natural resources; prepares and processes information and reports it to the EEA and other international bodies; prepares, processes and provides information in an appropriate format in connection with the obligation to report to the European Commission on the application of European environmental law; tests water quality at national level and assesses water monitoring data, including monitoring of the marine environment; compiles inventories of emissions, discharges and losses of all priority substances and pollutants pursuant to Council Directive 2008/105/EC; manages a national geographic information system for water; prepares comprehensive documentation on calibration laboratory accreditation and re-accreditation procedures, in accordance with the requirements of BDS EN ISO/IEC 17025:2006.

The **Laboratory and Analytical Activities Directorate** collects and analyses environmental samples to support actions of the National Environmental Monitoring System (NSMOS) on request from basin directorates for water management, regional environmental and water inspectorates and external clients, and in response to reports and complaints from citizens, public bodies and non-governmental organisations; carries out tests of the ambient air quality; the quality of surface, underground, waste, drinking and mineral water; the soil quality.

The Directorate provides methodological assistance and monitors the quality of analyses in 14 regional laboratories; participates in the drafting, harmonisation and application of standardisation documents in accordance with European environmental monitoring law; participates in inter-laboratory comparative tests at national, European and international level in order to ensure and monitor the quality of analyses carried out; draws up comprehensive documentation on laboratory accreditation and re-accreditation procedures, in accordance with the requirements of BDS EN ISO/IEC 17025:2006.

The **14 regional laboratories** carry out sampling, field measurement and laboratory testing of: surface water (including stagnant water) from NSMOS points and the network for monitoring abiotic factors in national parks, groundwater from NSMOS points and points for self-monitoring; waste water from the establishments subject to compulsory control and for carrying out own monitoring; surface water intended for drinking and household use. They sample and test soil from points included in the National Soil Monitoring System and the national parks soil monitoring network and carry out sampling and analysis for external clients. The regional laboratories handle control measures, complaints, notifications and emergencies

linked to the state of the environment. Regional laboratories by the River Danube and the Black Sea sample and test the water of the Danube (implement the River Danube monitoring programme) and sea water.

The regional laboratories use tried and tested modern laboratory measurement methods, and their appliances and equipment meet high international quality standards (ISO 9001). They have well-established systems for internal laboratory control of all samples tested, in line with the requirements of good laboratory practice, and regularly take part in inter-laboratory comparative testing.

The **Regional Environmental and Water Inspectorates (RIOSV)** are administrative units of the Ministry of the Environment and Water whose remit is the implementation of State policy on environmental protection at the regional level.

Through the regional environmental and water inspectorates, and within their regional scope, the Ministry of the Environment and Water monitors waste water, facilities that generate waste water, including water treatment plants for residential areas, and the parameters of, and compliance with, the conditions and requirements for waste water discharge permits and integrated permits issued under the Environmental Protection Act; monitors emergency waste water discharges; maintains a database of the monitoring carried out, including self-monitoring of permit holders, of the quantitative and qualitative characteristics of waste water, and of the monitoring of the state of waste water; maintains and updates lists of the facilities that generate emissions of priority substances and priority hazardous substances, as well as general and specific pollutants.

Basin Directorates (BDs) The director of a basin directorate implements State water management policy at basin level and drafts river basin management plans; plans and carries out water monitoring, and summarises and analyses data, including data on the chemical and ecological status of water and waste water; maintains specialised databases, maps, registers and a water information system; draws up programmes of measures to improve, protect and maintain the water status; defines safeguard zones around facilities for drinking and household water supply; issues regular water status bulletins; sets up and maintain databases for the monitoring carried out by them.

THE MINISTRY OF HEALTH (MZ) is the authority responsible for water and sewage operators' implementing European and national law on water intended for drinking and household use. Through its regional agencies, the 28 Regional Health Inspectorates, it is responsible for monitoring the quality of drinking water (including the presence of plant protection products).

When water contamination is identified, the relevant measures are taken to resolve non-compliance, and to inform the public and consumers.

Following the submission by the competent bodies at the Ministry of Agriculture, Food and Forestry of the complete set of plant protection products used by the Bulgarian producers and an analysis of the control monitoring carried out, the information on the analyses being performed and their results will be made available for the purpose of implementing the current national plan for drinking water.

In the performance of its duties under Article 21c(2) and (5) of the Protection against the Harmful Effects of Chemical Substances and Mixtures Act, the Toxicology Clinic at the N.I. Pirogov General Hospital for Active Treatment and Emergency Medical Aid is the competent authority, within the meaning of Article 45 of Regulation (EC) No 1272/2008 (CLP), for collecting and analysing information on instances of poisoning or suspected

poisoning by mixtures classified as hazardous on the basis of their health or physical effects. This information will also be made available for the implementation of the objectives of this programme.

THE MINISTRY OF TRANSPORT, INFORMATION TECHNOLOGIES AND COMMUNICATIONS

The **Civil Aviation Administration Central Directorate** is the national monitoring body for civil aviation and civil aviation equipment. Pursuant to Article 8(1) of the Civil Aviation Act, ‘the Minister of Transport, Information Technologies and Communications manages and monitors civil aviation and civil aviation equipment and facilities within Bulgaria’. Pursuant to Article 8(2) of the Civil Aviation Act, ‘the Minister of Transport, Information Technologies and Communications exercises his powers under paragraph 1 via the Civil Aviation Administration Central Directorate’.

III. MARKETING AND USE OF PLANT PROTECTION PRODUCTS

Plant protection products are authorised for marketing and use within Bulgaria when they comply with the requirements of 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.

Plant protection products are authorised for placing on the market and use following an authorisation to this effect issued in line with Regulation (EC) No 1107/2009 and Article 44(1) ZZR. The authorisation is issued by the Executive Director of the Bulgarian Food Safety Agency.

Regulation (EC) No 1107/2009 (specifically, Article 55) establishes that plant protection products must be used properly. Proper use includes the application of the principles of good plant protection practice and compliance with the conditions for which the product is authorised and the instructions specified on the label. Proper use also requires compliance with the provisions of Directive 2009/128/EC, and in particular, the general principles of integrated pest management, as referred to in Article 14 and Annex III of that Directive , which apply at the latest from 1 January 2014.

In connection with the implementation of Regulation (EC) No 1185/2009 of the European Parliament and of the Council of 25 November 2009 concerning statistics on pesticides, the competent bodies in the sphere of statistics for plant protection products are as follows:

- Ministry of Agriculture, Food and Forestry, Directorate General for Agriculture and Regional Policy, Agricultural Statistics Unit, with regard to statistics for annual plant protection product quantities used in agriculture collected once every five years;
- Bulgarian Food Safety Agency, Plant Protection Products and Fertilisers Directorate, Plant Protection Products and Fertilisers Monitoring Unit, with regard to statistics for annual plant protection product quantities placed on the market.

Table 1. Number of authorised plant protection products in Bulgaria and number of active substances contained in them:

Number of authorised plant protection products, by year	Number of approved active substances contained in PPPs, by year
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2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017
431	504	523	635	740	773	185	207	199	212	224	226

The current LIST OF PLANT PROTECTION PRODUCTS authorised for placing on the market and use in Bulgaria can be found on the Bulgarian Food Safety Agency website:

http://bfsa.bg/bg/Object/site_register/view/4/%D0%A0%D0%B0%D1%81%D1%82%D0%B8%D1%82%D0%B5%D0%BB%D0%BD%D0%B0

IV. OBJECTIVES

To reduce dependence on pesticide use, the National Action Plan for Sustainable Pesticide Use sets out **2 main objectives, each of which has specific targets, as follows:**

I. Reducing the risks and impact of pesticide use on human health and the environment, including:

✓ Protection of human health:

1. preventive protection of consumers – by reducing pesticide residues in food of plant origin;
2. reducing the risk of pesticide residues in food intended for children, as the most vulnerable consumer group;
3. avoiding and/or reducing the risk of pesticide residues in drinking water and bottled water;
4. protection of professional users, operators and agricultural workers – by reducing exposure to pesticides;
5. protection of residents and bystanders (people who happen to be present or passing by) in areas where pesticides are used – by avoiding and/or reducing their exposure to pesticides;
6. protection of the general public and vulnerable population groups – by avoiding and/or reducing the risks of pesticides in public spaces and recreational zones;
7. protection of non-professional users using pesticides on their own crops, gardens, yards, etc.

✓ Environmental protection

1. avoiding and/or reducing pesticide pollution of water and soil;
2. avoiding and/or reducing the risk of pesticide residues in water sources – both surface and groundwater;
3. avoiding and/or reducing the impact of pesticides on biodiversity, with special attention paid to bees and other non-target organisms.

II. Promoting integrated pest management and alternative approaches or methods, including:

1. Developing integrated pest management systems and alternative plant protection approaches or methods.

2. Introducing integrated pest management – through information campaigns and incentives, including financial incentives, for agricultural producers applying general and/or specific principles of integrated pest management;

3. Encouraging the use of non-chemical alternatives to pesticides wherever possible.

V. MEASURES

MEASURE 1. TRAINING OF PROFESSIONAL PESTICIDE USERS, DISTRIBUTORS AND ADVISORS

Bulgaria has improved the system for initial and additional training for professional users of pesticides, distributors and advisors, by introducing a system of certification of individuals who handle plant protection products as part of their professional activities (distributors, advisors and professional users) in line with the Plant Protection Act of 25 July 2015. This measure ensures that individuals working with pesticides are familiar with the potential risks to human health and the environment, and with ways to reduce these risks as much as possible.

Training is carried out by higher education institutions and in vocational education and training centres as defined in Article 9(1) of the Vocational Education and Training Act. Training modules provide information on the effects of pesticides on human health and the environment and on how they can be safely and correctly used, on integrated production, good plant protection practice, basic principles of integrated pest management, biological pest control methods, legal requirements related to plant protection products and fertilisers, forecasting and warning, quarantine pests, protection of bees, and other current topics relating to plant protection.

Individuals who handle professional-category plant protection products as part of their work must be properly informed about the subjects listed in Annex 2 to Article 85(1) of the Vocational Education and Training Act (Annex 1 to Directive 2009/128/EC). The certificate referred to in Article 83 ZZR is issued by the director of the Regional Directorate on production of an exam certificate from a higher education institution or a vocational training centre. Upon expiry of the 10- year validity of the certificate, these persons need to attend training again within one year prior to submitting the application for the renewal of the certificate.

Exception: Individuals who have completed higher education in the agrarian sciences are entitled to receive an initial certificate on presentation of their diploma, without having to sit a written test.

The certificate is invalidated in the event of serious or repeated breach of the Plant Protection Act or at the written request of the holder.

TRAINING SUBJECTS:

1. All relevant legislation regarding plant protection products and their use.
2. The existence and risks of illegal (counterfeit) plant protection products, and the methods to identify such products.
3. The hazards and risks associated with plant protection products, and how to identify and control them, in particular:

- a) risks to humans (operators, residents, bystanders, people entering treated areas and those handling or eating treated items) and factors exacerbating these risks;
 - b) symptoms of pesticide poisoning and first aid measures;
 - c) risks to non-target plants, beneficial insects, wildlife, biodiversity and the environment in general.
4. Notions on integrated pest management strategies and techniques, integrated crop management strategies and techniques, organic farming principles, biological pest control methods, information on the general principles and crop or sector-specific guidelines for integrated pest management.
 5. Development and initiation to comparative assessment to help professional users make the most appropriate choices on pesticides with the least side effects on human health, non-target organisms and the environment among all authorised products for a given pest.
 6. Measures to minimise risks to humans, non-target organisms and the environment: safe working practices for storing, handling and mixing pesticides, and disposing of empty packaging, other contaminated materials and surplus pesticides (including tank mixes); Recommendations to operators to use personal protection equipment.
 7. Risk-based approaches which take into account the local water abstraction variables such as climate, soil and crop types, and relieves.
 8. Following closely the procedures for preparing pesticide application equipment for work, including its calibration, and for its operation with minimum risks to the user, other humans, non-target animal and plant species, biodiversity and the environment.
 9. 'Best practices for protection of water from pollution caused by point sources due to PPP use'.
 10. Use of pesticide application equipment and its maintenance in line with the requirements, and specific spraying techniques (e.g. low-volume spraying and low-drift nozzles), as well as the objectives of the technical check of sprayers in use and ways to improve spray quality. Specific risks linked to use of handheld pesticide application equipment or knapsack sprayers and the relevant risk management measures.
 11. Carrying out emergency action to protect human health and the environment, including water resources, in case of accidental spillage and contamination and in extreme weather events.
 12. Special requirements for pesticide use within the National Ecological Network (NEM) area and other special protection areas established under current legislation.
 13. Reporting on any incidents or suspected incidents linked to pesticides by all types of health care establishments.
 14. Record-keeping on any use of pesticides, in accordance with the Plant Protection Act.

The Association for the Plant Protection Industry in Bulgaria (ARIB) conducts training on safe use of pesticides and on the mandatory use of personal protective equipment. All information and training materials (brochures, posters, guidance documents for advisors, short films) developed by the Association and agreed with the BFSA can be used to illustrate the training topics related to good practice for safe use of plant protection products.

ACTIONS under Measure 1:

- 1) Maintenance of a system of initial and additional training for individuals handling pesticides as part of their professional activities (professional pesticide users, distributors and advisors)

Deadline: ongoing

Responsible institution: Higher education institutions in the system of vocational education and training

- 2) Introduction of a system of certification of professional pesticide users, advisors and distributors

Deadline: ongoing

Responsible institution: BFSA

- 3) Maintenance of a public register of certificate holders for work with professional-use plant protection products on the BFSA.

Deadline for register maintenance: ongoing

Responsible institution: BFSA

EXPECTED RESULT of Measure 1:

Reduction of the risk and impact of the use of pesticides on human health and on the environment as a result of the provision and acquisition of specialist knowledge by professional users, distributors and advisors.

MEASURE 2. REQUIREMENTS FOR THE SALE OF PESTICIDES

The sale of pesticides is an important element in the distribution chain and at the time of sale to the end user (farmer) specific information on the safety instructions relating to human health and the environment must be provided. Non-professional users, who as a rule do not have the same level of education and have not undergone the same training, should be provided with recommendations relating specifically to the safe handling of plant protection products, their storage and the disposal of packaging.

Trade in PPPs and repackaging of PPPs must comply with the procedures and conditions stipulated in the Plant Protection Act and its implementing regulations.

Pursuant to the Plant Protection Act, trade in plant protection products and the repackaging of PPP are to be carried out by persons designated as traders under the Commerce Act who hold a licence issued by the Director of the Regional Food Safety Directorate. Trade or repackaging licences are issued for a period of 10 years.

Trade in PPPs is to be conducted at specialised facilities: warehouses for the storage of and trade in PPPs and/or agricultural pharmacies. repackaging is to be done at specialised repackaging facilities. Facilities for the trade in, storage of and repackaging of plant protection products must comply with the Spatial Planning Act and the regulations on the type of facility for the trade in and storage of PPPs issued under the Plant Protection Act in order to ensure the reliable and safe storage of these products.

Plant protection products of the professional use category may only be sold to individuals who hold a certificate under Article 83 ZZR for working with plant protection products of the professional use category. The certification system is described in the National Action Plan under 'Training for professional users of pesticides, distributors and advisors'.

Table 2. Requirements for persons who trade in PPP or re-package plant protection products:

Persons who trade in PPP or re-package plant protection products must provide at least one person		
for trade in PPPs at a warehouse	for trade in PPPs at an agricultural pharmacy	for repackaging of PPPs
Traders are to provide a person holding a degree in the field of agricultural sciences with a specialisation in Plant Protection or Plant Farming.	Traders are to provide a person holding a certificate under Article 83 ZZR.	The person responsible for the activity in the establishment and the persons carrying out this activity at the establishment must hold a certificate under Article 83 ZZR for handling professional-use plant protection products
Holds a certificate under Article 83 ZZR	Holds a certificate under Article 83 ZZR	Holds a certificate under Article 83 ZZR
is present at the time of the sale and provides information on the use of plant protection products, risks to human health, animals and the environment, and safety instructions. For sales to non-professional users, also provides information on hazards, exposure, proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives	is present at the time of the sale and provides information on the use of plant protection products, risks to human health, animals and the environment, and safety instructions. For sales to non-professional users, also provides information on hazards, exposure, proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.	Repackaging of plant protection products is carried out by persons who are traders under the Commerce Act and hold a licence for repackaging of plant protection products issued by the Director of the Regional Food Safety Directorate. Plant protection products are repackaged in packaging complying with the requirements for storage and transport of the plant protection product concerned where they have been authorised for placing on the market or used, or for parallel trade.

Trade in plant protection products is carried out by persons who are traders under the Commerce Act and hold a licence for trade in plant protection products issued by the Director of the Regional Food Safety Directorate.

PPP traders designate the persons responsible for trading at the facilities:

in a warehouse, traders are to appoint a person in charge who must hold a degree in the field of agricultural sciences with a specialisation in Plant Protection or Plant Farming. Where the trader has more than one facility, for each of them, he is to provide persons holding a certificate under Article 83.

The person holding a certificate under Article 83 ZZR and selling PPPs in a warehouse is to record in a logbook the professional-category PPPs delivered to the facilities . The logbook must contain the trade name, batch number, the number and volume of PPP packages and the delivery date. He must also record all sales of PPPs for professional use. The logbook must contains the trade name, number and volume of PPP packages, the date of sale and the number of the buyer's certificate under Article 83 ZZR .

A person holding a certificate under Article 83 must be available at an agricultural pharmacy.

Agricultural pharmacies may sell and store only plant protection products listed in categories 'professional use 2' and/or 'non-professional use' in packaging of up to 1 litres/kilograms.

The person holding a certificate under Article 83 ZZR and selling PPPs in an agricultural pharmacy is to record professional-use PPPs delivered to the pharmacy. The logbook must contain the trade name, the batch number, the number and capacity of PPP packages and the delivery date. He must also record all sales of PPPs for professional use. The logbook must contains the trade name, the number and capacity of PPP packages, the date of sale and the number of the certificate under 83 ZZR for any total purchase of more than 1 litre/kg.

The following is prohibited under the terms of the Plant Protection Act and its implementing regulations:

- storing for sale, trading and repackaging unauthorised and/or defective plant protection products;
- storing for sale and trading in plant protection products outside warehouses and agricultural pharmacies with a licence to trade in PPPs;
- trading in plant protection products at warehouses for trade in PPPs and agricultural pharmacies in the absence of the persons holding the certificates under Article 83 ZZR;
- storing and marketing plant protection products of professional-use category 1 in agricultural pharmacies;
- storing and marketing plant protection products in packages holding more than 1 litre/kg in agricultural pharmacies;
- selling professional-use plant protection products to persons who do not hold a certificate under Article 83 ;
- selling plant protection products where the package or the label is no longer intact;
- repackaging plant protection products outside repackaging sites for which a licence has been issued.

During the checks on trade in plant protection products inspectors from the Regional Directorate carry out checks on registered facilities: agricultural pharmacies, warehouses for the storage and distribution of plant protection products and plant protection product repackaging facilities; and on unregulated facilities (any facility not included above, for example markets, shops, trading areas, etc.); as well as checks following an warning.

Of the total number registered, the percentage of facilities checked annually is as follows, according to type:

- PPP producers – 100% of registered facilities, at least twice a year;

- warehouse for the storage of and trade in PPPs – 100% of registered facilities, at least once a year;
- repackaging facilities – 100% of registered facilities, at least twice a year;
- agricultural pharmacies – 80 - 100 % of registered facilities, at least once a year;
- unregulated facilities – the number of inspections depends on the number of assumed (potential) facilities where there is a risk of unregulated trade in PPPs.

ACTIONS under Measure 2:

1) Persons who trade in plant protection products must have ensured:

- For each PPP warehouse – at least one person with a degree in the agrarian sciences field who holds a certificate under Article 83 ZZR to work with plant protection products for professional use.
- For each agricultural pharmacy - at least one person holding a certificate under Article 83 ZZR to work with plant protection products for professional use.
- For each repackaging facility persons involved in repackaging must hold a certificate under Article 83.

In order to obtain a PPP repackaging licence, an application form approved by the Executive Director of the Bulgarian Food Safety Agency with enclosed certified copies of the employment contract and a certificate under Article 83 ZZR of the persons performing repackaging activities must be submitted to the Regional Directorate responsible.

Time limit for the requirements for persons trading in PPP: ongoing

Responsible institution: BFSA, PPP traders

2) The persons named in the trading licence are to be present when sales are made and provide information on the use of plant protection products and the risks to human health, animals and the environment and safety instructions. For sales to non-professional users they also provide information on hazards, exposure, proper storage, handling and application of the products and the safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.

Deadline: ongoing

Responsible institution: BFSA, PPP traders and their associations

3) Plant protection products of the professional use category may only be sold to individuals who hold a certificate under Article 83 ZZR for working with plant protection products of the professional use category.

Deadline: ongoing

Responsible institution: BFSA, PPP traders

4) Tackling illegal trade

Deadline: ongoing

Responsible institution: BFSA, AM, DG NP, ARIB, and other plant protection associations, farmers associations

EXPECTED RESULT of Measure 2:

Compliance with all legal requirements and provisions relating to the sale of pesticides reduces the risks and impact of pesticide use on human health and the environment, as a result of PPPs only being sold and distributed by competent persons and by those with knowledge of the potential impact and the proper way to use and store pesticides.

MEASURE 3. HANDLING OF PESTICIDES. STORAGE OF PESTICIDES AND MANAGEMENT OF THEIR PACKAGING AND RESIDUES

Handling of pesticides, including storage, diluting and mixing the pesticides and cleaning of pesticide application equipment after use, and recovery and disposal of tank mixtures, empty packaging and remnants of pesticides are particularly prone to unwanted exposure of humans and the environment. For this reason the National Action Plan for Sustainable Pesticide Use includes specific measures relating to such activities in addition to those contained in Directive 2008/98 of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

The measures also cover non-professional users whose lack of knowledge is highly likely to result in improper handling of plant protection products. Therefore, when selling to a non-professional user the sales person must provide information on hazards, exposure, proper storage, handling and application of plant protection products and safe disposal of their waste in line with the Waste Management Act, and propose low-risk alternatives.

➤ Plant protection products:

- are to be stored in the original sealed packaging supplied by the producer or the person who repackaged them, in accordance with the producer's instructions printed on the label;
- which are not fit for use or have had their authorisation withdrawn, or whose grace period for use has expired, are to be clearly marked and stored in a secure, dedicated space in a plant protection product warehouse and are to be disposed in accordance with the Waste Management Act; the owner is responsible for the storage, handover and payment for the disposal of unfit for use or unauthorised plant protection products;
- are to be used in accordance with Article 55 of Regulation (EC) No 1107/2009, and as specified in the provisions of the Plant Protection Act and its implementing regulations;
- are to be used in accordance with their authorised uses and are subject to the conditions and guidelines indicated on the labels and in such a way as to prevent damage to other plants and plant products, and not to endanger human and animal health or the environment; The conditions, procedures and the intended use of plant protection products are laid down in a regulation issued by the Minister for Agriculture, Food and Forestry;
- are applied by specialised machinery and equipment that is in line with the requirements of the Act on registration and control of agricultural and forestry machinery.
 - The treatment with plant protection products of seeds intended for sowing on the holding is carried out only with specialised machinery and/or equipment complying with the Act on the registration and control of agricultural and forestry machinery;
 - warehouses for plant protection products must be subject to controlled and restricted access, to ensure the reliable and safe storage of plant protection products in them, and to comply with the requirements of the Spatial Planning Act and the regulations governing the types of PPP marketing and warehouses, issued on the basis of the Plant Protection Act;
 - Farmers keep plant protection products intended for use on the holding in specifically built warehouses or in designated places on their holding. warehouses must be secured and have controlled access. They must be dry and cool, without direct sunlight and ensure

reliable and safe storage of the plant protection products in them.

- Handling PPPs requires the use of the necessary personal protective equipment (PPE) when preparing and applying the working solution. Overalls, nitrile rubber gloves, rubber boots, a face shield or face mask (or goggles), a hat with a visor are the basic recommended PPE when handling pesticides;
- Preparation of a working solution of plant protection products and cleaning of equipment for the application of plant protection products is carried out in such locations and in such a way so as not to pollute the environment and in compliance with the instructions on the product label;
- The pesticide packaging must be rinsed three times during preparation of the solution and the rinse water poured into the spray tank. The empty packages, after good draining, are rendered unfit for reuse by punching holes into, crushing, etc. and are placed in waste collection bags and stored in a specially designated place in the PPP warehouse until they are handed over at points set up by the operator of the pesticide package collection system.
- Unused quantities of working solution must be used under the same conditions and for the same ends, or, if there is no opportunity to make use of them, must be treated as waste, following the instructions on the product label and in line with the Waste Management Act;
- When agricultural areas are being treated with plant protection products an appropriate protection zone and distance from adjacent sensitive crops must be kept in accordance with the instructions shown on the plant protection product label;
- Empty PPP packaging must be handled and treated in accordance with the instructions on the label and in line with the Waste Management Act.

Individuals who produce, cultivate, store and trade in plants and plant products must keep a logbook of plant protection products and fertilisers used. The logbook must be kept as a hard copy or on an electronic medium and must be archived for at least three years from the date of the last entry. On request, the logbook must be presented to the Bulgarian Food Safety Agency. The logbook is examined and certified by plant protection inspectors from the plant safety directorate for the region where the field, facility or plant and plant product warehouse is located. Farmers may receive help on log keeping from advisors on integrated pest management or agronomists.

The following must be entered in the logbook:

- each application of a plant protection product, the product type and name, the crop, the area, the application dose, the time and the application equipment used, including treatment of seeds, and the quantity of plant protection products used for each field or plant and plant product warehouse;
- the type of pest that the plant protection products are being used against, the established pest density, the extent of infestation or spread, including a forecast of its appearances;
- the results of analyses of pesticide residues or other pollutants in plant and plant product samples;
- data identifying the person responsible for carrying out the plant protection action; the responsible person must hold a certificate under Article 83 ZZR.

Information relating to the use category of plant protection products:

The use category system allows each plant protection product to be classified into a specific group with a view to limiting its use to a specified consumer category.

- Plant protection products are to be placed in two use categories: professional and non-professional. **professional and non-professional.**

- The professional use category is divided into two sub-categories: **professional 1 and professional 2.**
- The use category for a given plant protection product is determined following an expert appraisal of the product, taking into account:
 - the conditions and restrictions for authorisation of the active substances;
 - the classification of plant protection products in one or more environmental and health hazard categories pursuant to Regulation (EC) No 1272/2008;
 - risk assessment, including the need to use personal protection equipment;
 - authorised uses and consumer categories.
- A plant protection product containing an active substance classed as active substance that is a candidate for substitution is placed in the professional category.
- Plant protection products containing only active substances classed as low-risk substances and basic substances within the meaning of Articles 22 and 23 of Regulation (EC) No 1107/2009 are placed in the non-professional category.
- When establishing the category of a given plant protection product additional criteria may be introduced, depending on its specific use and the hazard it poses to the health of the consumer.
- The use category of plant protection products is determined by the Plant Protection Products Council when the product is authorised.

The user group is determined depending on the use category defined in the authorisation of the plant protection product:

- 1) plant protection products of professional category 1 may be applied only by users holding a certificate under Article 83 ZZR supervised by an agronomist with a specialisation in Plant Protection or Plant Farming;
- 2) plant protection products of professional category 2 are used by users holding a certificate under Article 83 ZZR;
- 3) Plant protection products of the non-professional use category may also be applied by persons who are at least 18 years old.

The following are prohibited under the Plant Protection Act:

- use and storage with a view to using unauthorised or unfit-for-use plant protection products;
- use of plant protection products for plant protection on crops and against pests which do not fall within the scope of authorised use;
- application of plant protection products in a dose/quantity or concentration which exceeds the maximum permitted dose/quantity per unit of area or percentage of working solution for the relevant use;
- harvesting of agricultural products before the end of the quarantine period for plant protection products used, as stated on the label.
 - aerial spraying of plant protection products:
 - use of seed treatment with plant protection products for purposes other than sowing;
 - use of plant protection products in breach of the bans and restrictions set out in the

ordinance under Article 135(1)(6) of the Water Act.

Controls on agricultural producers carried out by inspectors from the Regional Directorates include:

➤ **Document check:**

Logbook on the application of plant protection measures and fertilisers (*Logbook of chemical treatments performed and fertilisers, soil improvers, and biologically active substances used.*)

• General:

- Settlement, plot, plant production warehouse;
- Locality, cadastral reference, field No, crop;
- Variety/hybrid, cultivated area, predecessor, sowing date.

• Plant protection events, specialised data:

- pest against which a PPP and/or a biological agent was used;
- date of application of a plant protection product and/or biological agent, PPP/biological agent trade name, treated area, dose and application period, quarantine period for the product;
- the earliest date for harvesting the crop;
- Name of the person holding a certificate under Article 83 ZZR who is responsible for carrying out the plant protection action depending of the PPP's category of use.

• Mineral and organic fertilisers, soil improvers, and biologically active substances used:

- Fertiliser's date of use, trade name (composition; active substance in %)
- Physical quantity used (kg/decare);
- Fertilised land in decares, yield in kilogram per decare.

In the event of incomplete or inaccurate records in the logbook on the application of plant protection measures and fertilisers, the non-compliance is recorded in the CP with an instruction for its removal by a specific date. In the inspection report, the instruction must be entered under the Note heading.

Logbook on the appearance, development, density or degree of pest infestation:

• Regular records on the observations made related to the appearance, development, density or degree of pest infestation:

• General:

- field number, according to the single area register;
- Variety/hybrid, cultivated area, predecessor;

• Specialised data:

- diseases identified, area covered (in decares), infested area (in decares), degree of infestation (%);
- Pests identified, area covered (in decares), infested area (in decares), stage of development, density (number/m²).

Logbook on sampled and analysed plants and plant products:

- Regular records of samples of plants and plant products taken by the control body or for self-monitoring;
 - place, date and time of sample collection;
 - Full name of the inspector taking the sample;
 - Full name and position of the representative of the natural person or legal entity present at the time of sampling;
 - crop area (decare), name of the plants or plant product from which the sample was taken (crop);
 - number and quantity of primary samples taken;
 - quantity of aggregate sample (kg, number);
 - name of the laboratory performing the analysis;
 - date of receipt of the results from the analysis;
 - outcome of analysis
 - findings and recommendations of the inspector, in case of second inspection, signature of the inspector.
- Consistency of the pests data in the Logbook on the appearance, development, density or degree of pest infestation with the treatments recorded in the Register of chemical treatment.
- Existence of invoices, delivery dockets and other documents for the purchase of plant protection products.
- Existence of invoices, delivery dockets, certificates, labels and other documents for the purchase of certified seeds and propagating material.
- Certificate under Article 83 ZZR for the use of professional plant protection products;
- Records of fumigation activities carried out;
- Degree in agricultural sciences with a specialisation in Plant Protection held by the person controlling the fumigation process and the contract with this person, where applicable;
- Certificate of completed fumigation training held by the person performing the fumigation;
- Certificate under Article 83 ZZR held by the person who carries out the fumigation and the contract with this person, where applicable;
- Degree in agricultural sciences with a specialisation in Plant Protection or Plant Farming held by the person controlling the treatment of seeds and the contract with this person, where applicable;
- Certificate under Article 83 ZZR held by the person who carries out the treatment of seeds and the contract with this person, where applicable;
- Prescription for the use of PPPs by aerial spraying issued by a person with a university degree in agronomy;
- Contract between the farmer and the aviation operator carrying out aerial spraying;

- Notification letter to the mayor of the populated area where the land will be treated with ground equipment and a land treatment scheme which reflects the crop variety and phenophase as well as the variety and phenophase of crops in adjacent areas;
- The authorisation for the application of PPPs by aerial spraying, issued by the relevant Regional Directorate.

➤ **Physical Check:**

- **Inspection of the farmer's PPP warehouse:**

Farmers keep plant protection products intended for use on the holding in PPP warehouses. Warehouses must have controlled access and ensure secure storage of plant protection products.

- The warehouse is a separate building or a specially designated place on the holding;
- It is secured and has controlled access;
- The warehouse is dry and cool;
- It is protected from direct sunlight;
- List of the PPPs available in the storage intended for use only on the farmer's holding;
- Where PPPs of professional category 1 are used, the presence of a metal lockable cabinet or a part of the warehouse with solid partition walls;
- Presence of shelves or racks on which plant protection product are stored;
- Arrangement of PPPs by purpose and placement of marking signs;
- Separate area for the temporary storage of empty PPP packages;
- Contract with a PPP distributor or a company holding a waste management document under the Waste Management Act for the collection of empty PPP packaging.
- **On-the-spot checks** on the application of PPPs using ground equipment and by aerial spraying; seed decontamination and fumigation.

Checks are carried out on farmers who apply plant protection products in the production of crops. Data on registered farmers are taken from the Register of Farmers of Plant Products, which is kept by the Ministry of Agriculture and Food.

Use of PPPs with ground equipment:

- When agricultural areas are being treated with plant protection products an appropriate protection zone and distance from adjacent sensitive crops must be kept in accordance with the instructions shown on the plant protection product label;
- Protection zones are not less than 200 m wide when the wind is blowing away from the settlement, and not less than 800 m when the wind is blowing towards the settlement and the apiaries;
- The crop and weed vegetation phenophase, the degree of infestation, the pests' stages of development;
- Plant protection products are used in the relevant concentration or the dose for use approved in the authorisation for PPPs use with plant protection product application equipment and specialised equipment at wind speeds up to 5 m/s, where the equipment

for the application of PPPs ensures the reduction of spray drift and up to 2 m/s without such equipment;

- The use of plant protection products with ground equipment at wind speeds of more than 5 m/s and with an air temperature above 25 °C, measured in the shade, is prohibited;
- Insecticides may be used with ground technique from sunset until 10.00 a.m. on the following day;
- PPP treatment of areas cannot continue for more than 3 days on a given plot;
- The persons using PPPs inform the mayor of the settlement and the mayors of the neighbouring settlements about the completion of the treatment.
- The preparation of the working solution is carried out at a dedicated site in a manner that is safe for the environment and in compliance with the instructions on the PPP label;
- Appropriate personal protective equipment is used in the preparation of the working solution;
- In order to reduce the risk of and avoid direct or indirect contamination of surface water or groundwater, sprinklers must be rinsed (three times) after use and the resulting effluent must be collected in a container and handed over for destruction, or rinse water must be collected in a container, concentrated by natural evaporation and handed over for destruction. The rinse water from the sprinkler may also be sprayed in the field.
- Unused amounts of working solution must be treated in line with the Waste Management Act.
- Empty PPP packages are stored indoors in dedicated, secure locations and treated in accordance with the provisions of the Waste Management Act.

Aerial spraying of plant protection products:

- Plant protection products may be applied by aerial spraying as an exception to the prohibition under Article 107(3) ZZR, only after a written authorisation has been issued by the director of the RFSD.
- Where aerial spraying with aerial equipment is used for PPP application, it is required to respect protection areas of not less than 200 m when the wind is blowing away from the residential area, and not less than 800 m when the wind is blowing towards the residential area.
- Aerial spraying of PPP is prohibited at a wind speed exceeding:
 - 2 m/sec for treatment with herbicides, desiccants and defoliant;
 - 5 m/s for treatment with insecticides, fungicides and growth regulators;
- The weather elements at the time of treatment, before treatment and after treatment are recorded in the logbook ;
- Insecticides may be used with aerial equipment from sunrise until 10.00 a.m.;
- Treatment with plant protection products is not authorised for flowering vegetation, pasture land, water abstraction zones and on buffer zones designated during the authorisation procedure for plant protection products. The treatment contracting entity is required to mow the flowering vegetation on buffer strips between permanent crops (orchards, vineyards, etc.) prior to treatment;

- In emergency situations, calamity or epiphytotic outbreak of economically significant pests, declared by order of the Minister for Agriculture and Food, the BFSA recommends that bee-friendly (less toxic) plant protection products be used during crop flowering
- The persons using PPPs with aviation equipment inform the mayor of the locality where the treatment will take place and the mayors of localities adjacent to the land treated at the latest 3 days prior to the treatment;
- Persons applying PPPs by aerial spraying inform in an appropriate manner the owners of apiaries located in the locality where the areas to be treated are located, as well as the owners of apiaries located in the adjacent localities about the date and time each application of the PPPs will take place;
- PPP treatment of areas may not continue for more than 5 days;
- The persons applying PPPs by aerial spraying inform the mayor of the locality and the mayors of the neighbouring localities about the completion of the treatment.
- The preparation of the working solution is carried out at a dedicated site in a manner that is safe for the environment and in compliance with the instructions on the PPP label;
- Appropriate personal protective equipment must be used when preparing the working solution.
- Empty PPP packages are stored indoors in dedicated, secure locations in accordance with the provisions of the Waste Management Act.
- To ensure compliance with the requirement, on-the-spot checks covering the entire area are conducted during aerial spraying.

Use of PPPs for seed treatment.

- PPPs may be used for seed treatment when approved for this purpose, and must be applied with specialised equipment and equipment on specialised premises;
- Seeds are treated in specialised facilities or on controlled access sites, constructed at a distance of not less than 100 metres from residential buildings;
- The treatment of seeds as a specialised plant protection service is carried out by persons registered in the register referred to in Article 6(1)9(b) ZZR, under the supervision of a person holding a degree in the agricultural sciences with a specialisation in 'Plant Protection' or 'Plant Farming';
- The sites must be equipped with seed cleaning machines, equipment for mixing the treatment solution, equipment for the application of the solution to the seeds and machinery for packing treated seed in sacks and containers for separate collection of contaminated and uncontaminated waste;
- Persons involved in seed treatment with PPP must hold a certificate under Article 83 ZZR;
- During the treatment of seeds, operators use personal protective equipment for the protection of the skin, eyes and respiratory tract as indicated on the PPP label;
- Treated seed are stored in special bags in controlled access warehouses that are dry, aerated and protected from harmful organisms;
- Transportation of treated seeds is only carried out in special bags. The bags may not be re-used for other purposes but are to be destroyed under the Waste Management Act;

- The transportation of loose treated seeds takes place on the holding immediately before sowing.

The use of PPPs for fumigation.

- Plant protection products are used for the fumigation of plants, plant products and other objects when approved for that purpose;
- Fumigators must hold a certificate under Article 83 ZZR and have undergone a specific fumigation training;
- Fumigation of plants, plant products and other objects as a specialised plant protection service is carried out by persons registered in the register referred to in Article 6(1)9(b) ZZR, under the supervision of a person holding a degree in agricultural sciences with a specialisation in ‘Plant Protection’.
- A sign ‘poison’ must be present, prohibiting access to the site due to treatment with highly poisonous substances. The signs are removed at the end of the quarantine period or after degasification of the site.

Following the identification of a non-compliance with the regulatory provisions an order is issued giving a deadline for its removal or an infringement notice is issued pursuant to the provisions of the Plant Protection Act and the Apiculture Act.

Empty plant protection product packaging must be stored indoors in secured, dedicated locations and are to be managed and handled in accordance with the instructions shown on the label and pursuant to the provisions of the Waste Management Act.

IMPORTANT!
**It is prohibited to abandon, bury,
litter, burn, dump
or otherwise dispose of
empty plant protection product packaging in an unregulated manner.**

The Association for the Plant Protection Industry in Bulgaria successfully set up a collection system for pesticide packaging in Bulgaria in order to reduce the risks associated with the use of plant protection products, meet the requirements of the Plant Protection Act and the Waste Management Act, and provide a safe way of disposing of empty plastic packaging of pesticides.

Since 2017 the system covers the whole country and is accessible to all farmers. The collection of empty plastic PPP packages is financed entirely by the companies participating in the system. The service is free of charge for farmers; there is only one condition: packaging should be rinsed three times during preparation of the spray solution and empty packaging should be properly stored until its collection by/handing over to the operator.

For their part, end consumers of plant protection products are obliged to return empty packaging in line with the system in place for the collection of packaging under the Waste Management Act.

TOPPS BULGARIA PROJECT: A VOLUNTARY INITIATIVE FOR THE HANDLING OF PESTICIDES AND THEIR PACKAGING

This project started in 2010 at the initiative of the Association for the Plant Protection Industry of Bulgaria (ARIB), together with the former National Plant Protection Service (NSRZ), as the official local partner, with the aim of training operators to avoid water pollution with plant protection products from point sources.

The TOPPS project is being implemented in 15 EU Member States. Its main objective is to ensure that the best practices already in existence at European level to safeguard water from pollution during the use of plant protection products are adapted to suit Bulgarian conditions and are disseminated via advice, consultation, training and demonstrations. This is being done to reduce the risk of pollution of underground and surface water with plant protection products from point sources.

The TOPPS Bulgaria project currently organises training courses for interested parties – farmers, advisors, PPP distributors, etc. – in all 28 regions on the subject of ‘Best practices (BP) to safeguard water from pollution caused by point sources during the use of PPP’.

The training courses make use of photographs, films and demonstration material in the form of brochures, posters and folders to provide a visual and accessible display of the impact of using plant protection products at every stage. The trainers give demonstrations in the calibration and triple rinsing of spraying equipment.

ACTIONS under Measure 3:

- 1) Maintenance of a register of authorised PPPs on the BFSA website

Enclosing a label and safety information sheet in Bulgarian with each product on the list.

Deadline for register maintenance: ongoing

Responsible institution: BFSA

- 2) Regulation of requirements for farmers’ PPP warehouses through Regulation No 3 on the production, trade, repackaging and storage of plant protection products, issued by the Minister for Agriculture and Food on the basis of the Plant Protection Act and bringing warehouses into line with its requirements.

Deadline: ongoing under the ZZP and Regulation No 3 of 31 July 2017 Year 2017

Responsible institution: BFSA

- 3) Implementation of a collection system for empty PPP packaging.

Deadline: ongoing under ZZR

Responsible institution: crop cultivation associations, producers, repackagers, traders, farmers

- 4) Trainings on the safe use of PPPs carried out

Deadline: ongoing

Responsible institution: Plant protection associations

EXPECTED RESULT of Measure 3:

Reduction of the risks and impact of pesticide use on human health and on the environment as a result of proper handling and storage and the proper packaging and treatment of unused quantities of working solution.

MEASURE 4. INSPECTION OF THE EQUIPMENT USED TO APPLY PESTICIDES

Directive 2009/127/EC of the European Parliament and of the Council of 21 October 2009 amending Directive 2006/42/EC with regard to machinery for pesticide application lays down essential requirements for the protection of the environment in the design and manufacture of new machinery for pesticide application, while ensuring that such requirements are compatible with the requirements of the Framework Directive.

The requirements for placing equipment for pesticide application on the market, and the requirements for technical inspections on equipment for pesticide application in use, are laid down in the Act on the registration and inspection of agricultural and forestry machinery. Pursuant to that Act, pesticide application equipment that is in use is subject to mandatory inspections to ensure the safety and protection of human health and the environment. Regulation No 5/2016 lays down the procedure for conducting regular inspections of the PPP application equipment. The checks are carried out by the MAFF testing and certification centres and the Regional Agriculture Directorates and the intervals between inspections on pesticide application equipment in use are:

1. one inspection before 26 November 2016
2. one inspection every five years up to 2020
3. one inspection every three years after 2020.

From 26 November 2016 it is mandatory to use only pesticide application equipment that has passed an inspection for safety and protection of human health and the environment.

New pesticide application equipment is inspected at least once within five years of its purchase.

Mandatory inspections of pesticide application equipment that is in use, which are aimed at ensuring the safety and protection of human health and the environment, are to be carried out under the MAFF testing and certification centres and the Regional Agriculture Directorates by test engineers trained in mechanised agricultural equipment and using mobile sprayer test equipment.

The procedure for periodic inspections of pesticide application equipment, the certification and control system for inspections of pesticide application equipment and the recognition of certificates issued by other Member States is laid down in a regulation of the Ministry of Agriculture and Food.

In connection with the requirements of the Sustainable Use Directive, the following auxiliary pesticide application equipment is subject to mandatory inspections in respect of the safety and protection of human health and the environment:

- spraying equipment mounted on aircraft;
- spraying equipment mounted on trains;
- boom sprayers over 3 m in length, including those attached to sowing equipment.

Checks on spraying equipment mounted on trains and on boom sprayers over 3 m in length, which includes those attached to sowing equipment (including spraying attachments mounted on seeders, harrows, cultivators or other machines), are to be carried out by the MAFF testing and certification centres and the Regional Agriculture Directorates at the

Ministry of Agriculture, Food and Forestry. The intervals between checks on train-mounted spraying equipment and on boom sprayers over 3 m in length, including those attached to sowing equipment, are: one inspection before 26 November 2016; one inspection every five years up to 2020; one inspection every three years after 2020.

The following pesticide application equipment is also subject to mandatory inspections, but with schedules and intervals that differ from those given above:

- seed decontamination equipment;
- granule applicators;
- aerosol generators.

Inspections of the listed equipment for pesticide application are carried out by the Regional Agriculture Directorates.

The following pesticide application equipment is exempt from mandatory inspection:

- manual sprayers (handheld sprayers);
- knapsack sprayers – manually driven;
- knapsack sprayers with electric motor;
- knapsack sprayers with petrol engine.

Given that this type of pesticide application equipment is exempt from inspection, operators of equipment of this kind are to be informed by the Control and Technical Control Unit at Directorate General for Agriculture and Regional Policy at the Ministry of Agriculture, Food and Forestry of the need for routine replacement of accessories and of the specific risks associated with such equipment.

In view of the requirement for the initial and additional training of individuals who handle pesticides as part of their professional activities, it is necessary for operators to be trained in the proper use of pesticide application equipment.

ACTIONS under Measure 4:

- 1) Pesticide application equipment using ground machinery currently in use is subject to mandatory inspection with respect to the safety and protection of human health and the environment.

Deadline: one inspection before 26 November 2016; one inspection every five years up to 2020; one inspection every three years after 2020.

*Responsible institution: Testing and certification centres in Plovdiv and Ruse,
Ministry of Agriculture, Food and Forestry
Regional Agriculture Directorates*

- 2) Only ground-based pesticide application equipment that has passed inspection must be in use after 26 November 2016.

Deadline: new pesticide application equipment using ground-based machinery is inspected within five years of its purchase.

*Responsible institution: Testing and certification centres in Plovdiv and Ruse,
Ministry of Agriculture, Food and Forestry
Regional Agriculture Directorates*

- 3) PPP application equipment mounted on trains or aircraft is subject to periodic inspections, as laid down in Regulation No 5/2016.

Deadline: ongoing

Responsible institution: Testing and certification centres in Plovdiv and Ruse,
Ministry of Agriculture, Food and Forestry
Regional Agriculture Directorates

- 4) Aircraft with aerial equipment for the application for plant protection products must undergo a roadworthiness test as required by Regulation No 37 of 19 October 2016 on air operators.

Deadline: ongoing

Responsible institution: GD Civil Aviation Administration

EXPECTED RESULT of Measure 4:

The use of inspected pesticide application equipment ensures a reduction of the risks and impact of pesticide use on human health and the environment.

MEASURE 5. AERIAL SPRAYING

Aerial spraying of pesticides has the potential to cause a significant harmful impact on human health and the environment, in particular from spray drift. The Sustainable Use Directive prohibits the aerial application of pesticides at European level, although a derogation is admissible in special instances.

The Plant Protection Act prohibits the aerial spraying of agricultural crops and other areas using plant protection products. In exceptional cases, where there are no viable alternatives to protect plants and plant products from pests, or where there are clear advantages in terms of reduced impact on human health and the environment as compared to the land-based application of plant protection products, aerial spraying may be carried out, but only with a written permission issued by the Bulgarian Food Safety Agency. The competent bodies as far as aerial spraying is concerned are:

- the Bulgarian Food Safety Agency, which sets the specific conditions and special requirements under which aerial spraying may be authorised;
- the Civil Aviation Administration Central Directorate at the Ministry of Transport, Information Technology and Communications authorises the use of aircraft and equipment for aerial application of plant protection products;

As an exception to the ban on aerial spraying under Article 107(3) ZZR, plant protection products may be applied by aerial spraying only after a written authorisation issued by the director of the Regional Food Safety Directorate, when there is a danger for plants and plant products, and under the following conditions:

1. where it is not feasible to use ground-based equipment because of unfavourable agroclimatic conditions or very damp soils;
2. where treatment has to be carried out within tight deadlines because of the passing of phenophases or pest development phases that are suitable for treatment;
3. where very rugged and inaccessible areas, including forests, are involved.
4. where there is a risk of soil erosion or compaction.

For aerial spraying to be authorised the **following requirements must be met:**

1. the plant protection products used are authorised for aerial spraying at national level;
2. the aviation operator that is to carry out the aerial spraying holds a certificate to perform specialised aviation works under Article 64(2) of the Civil Aviation Act
3. at least one member of staff of the aviation operator holds a certificate under Article 83 ZZR for working with PPP of the professional use category.
4. the equipment for the application for plant protection products has passed a roadworthiness test as required by Regulation No 37/2016 on air operators.
5. the aircraft is fitted with the best equipment available for reduction of spray drift;
6. treatment areas do not fall within safeguard zones I, II and III around water sources or equipment for surface abstraction for drinking and household water supply, or within zones I and II around water sources for drinking and household water supplied from groundwater, or for mineral water used for therapeutic, preventive, drinking and hygiene needs as defined in Regulation No 3/2000 on the conditions and procedures for the prospection, design, approval and operation of safeguard zones around water sources and equipment for drinking and household water supply and around sources of mineral water used for therapeutic, preventive, drinking and hygiene needs, as issued by the Minister for the Environment and Water, the Minister for Health and the Minister for Regional Development and Public Utilities.
7. the areas to be treated are not in the vicinity of residential areas, parks and gardens or sport and entertainment facilities.

To protect agricultural crops, ecosystems and biodiversity in areas adjacent to a zone which is to be treated with PPPs, the National Action Plan recommends the use of ground spraying equipment with aerial spraying of herbicides kept to a minimum, only if proven necessary.

IMPORTANT!
The Plant Protection Act prohibits the use of PPPs by aerial spraying and introduces an authorisation requirement where a derogation is needed.

To obtain authorisation for aerial spraying applicants are required to submit an application form to the regional food safety directorate for the area in which the treatment zone is located, at the latest 6 days prior to the treatment date.

Within three days of submission of the application, plant protection inspectors examine the documents to verify that they meet the authorisation requirements for aerial spraying, and if necessary carry out an on-site inspection.

In exceptional cases, when justified by special circumstances or emergencies, an application may be submitted up to three days prior to the treatment date.

The director of the regional food safety directorate either authorises the treatment or refuses to issue an authorisation, stating the reasons for such a refusal.

The authorisation also contains measures for warning residents and bystanders, for protecting nearby sensitive crops and for protecting the environment in the vicinity of the treatment area. The deadline for notifying the owners of bee colonies located on the land of the locality of the areas to be treated, as well as the owners of bee colonies located in adjacent localities, of the date and time when each application of plant protection products by aerial spraying will take place.

Authorisations for the aerial spraying of crops on a specified area are issued for a period of no more than five consecutive days.

Aerial spraying operations must observe the provisions of Regulation No 13/2016, on measures to protect bees and bee colonies from poisoning and ways to carry out plant protection, disinfection and insecticidal activities, and the provisions of Regulation No 24/2000, issued by the Minister for Transport, Information Technology and Communications, on the issue of certificates to aviation operators carrying out specialised aviation work.

The Civil Aviation Administration Central Directorate provides the Bulgarian Safety Agency with a list of aviation operators who hold certificates to perform specialised aviation work issued under the procedure laid down in Regulation No 37/2016 on aviation operators carrying out specialised aviation work, and informs the BSFA of any changes.

The regional food safety directorates publish all relevant information on authorisations linked to carrying out of aerial spraying, along with the location of the areas to be sprayed, the planned day and time of the spraying and the type of plant protection product. The information is published on the Bulgarian Food Safety Agency's website and disseminated by the regional food safety directorates via mayor's offices and local mass media, or by some other suitable method.

ACTIONS under Measure 5:

- 1) Prohibition of aerial spraying of agricultural crops and other areas with plant protection products.

Deadline: ongoing under ZZR

Responsible institution: BFSA

- 2) Performance of aerial spraying only with a written authorisation issued by BFSA, in exceptional cases when there are no viable alternatives to protect plants and plant products from

pests, or where there are clear advantages in terms of reduced impact on human health and the environment as compared to the land-based application of plant protection products

Deadline: ongoing under ZZR

Responsible institution: RFSD

- 3) Establishment of specific conditions and special requirements for the authorisation of aerial spraying.

Deadline: ongoing under ZZR

Responsible institution: RFSD

- 4) Authorisation for the use of aircraft and aviation equipment for the aerial spraying of plant protection products.

Deadline: ongoing

Responsible institution: MTITS, GD GVA

- 5) Verifying compliance with the ban on aerial spraying of PPPs and the derogation requirements.

Deadline: ongoing

Responsible institution: BFSA, RFSD

- 6) Authorisation at national level of PPPs for aerial spraying.

Deadline: within three years of the entry into force of the Regulation on the authorisation of PPPs issued by the Minister of Agriculture, Food and Forestry.

Responsible institution: BFSA, RACFC

- 7) Prohibition or suspension of aerial spraying when irregularities and non-compliances are identified.

Deadline: ongoing under ZZR

Responsible institution: BFSA, RFSD

- 8) Provision of information to the public on authorisations issued for aerial spraying, including the zone that is to be sprayed, the planned day and time of the spraying and the type of plant protection product. The information will be published on the Bulgarian Food Safety Agency's website and will be disseminated by the regional food safety directorates via local authority offices and local mass media, or by some other suitable method.

Deadline: ongoing under ZZR

Responsible institution: BFSA, regional directorates, local authority offices, local mass media

EXPECTED RESULT of Measure 5:

Reduction of the risks and impact of pesticide use on human health and the environment as a result of the prohibition of aerial spraying; greater public awareness of aerial sprayings carried out; reduction of aerial spraying to a minimum carried out only in exceptional cases and if proven necessary, in compliance with the directive.

MEASURE 6. INTEGRATED PEST MANAGEMENT

In Bulgaria, provisions for the introduction and improvement of integrated plant and plant product pest control methods have been in place since the Plant Protection Act of 1997. According to Regulation No 15 of 3 August 2007 on the conditions and procedures for the integrated production of plants and plant products and their marking, currently in effect, agricultural producers may carry out integrated production of plants and plant products by applying the general and specific principles of integrated pest management, and may mark their products with the label 'INTEGRATED PRODUCTION'.

Guides to integrated pest management have been compiled and published for 47 types of agricultural crops in the following seven groups:

- cereal crops: wheat, barley, oats, rye, corn;
- dry pulses: kidney beans, peas, lentils, soya, lucerne;
- industrial crops: sunflowers, oil-seed rape, tobacco, sugar beet, cotton, peanuts;
- vegetable crops: tomatoes (grown in the open and under glass), peppers (grown in the open and under glass), cucumbers (grown in the open and under glass), pumpkins, courgettes, watermelons, melons, cabbages, cauliflowers, Brussels sprouts, onions, garlic, leeks, potatoes;
- fruit crops: apples, pears, quinces, plums, cherries, sour cherries, peaches, nectarines, apricots;
- vines and berry crops: grapes, strawberries, raspberries, blackcurrants;
- essential oil crops: rose, mint, lavender, coriander.

These guides are available on the website of the MAFF.

The guides explain the general principles of integrated pest management and present the specific principles of integrated pest management for each crop.

Farmers have access to integrated pest management training at accredited institutions and higher education establishments specialising in plant protection (University of Agriculture in Plovdiv and the Forestry University in Sofia), whose curriculum has been drawn up by the training institution and approved by the executive director of the BFSa.

Integrated plant protection includes the regulation and maintenance of pest species populations at a level that prevents them causing economic damage, with maximum protection given to natural and beneficial organisms. The presence of known numbers of harmful organisms is a prerequisite for the stability of the agrobiocenosis and for an increase in its self-regulation.

Decision-making in integrated pest management is based on a system of observation, diagnosis, forecasting and warning. Forecasting diseases and pests is chiefly based on data from pest diagnoses and information on the impact of the environment on the development of pests and the host plant. In order to make the correct decisions and take the correct control measures, a wide range of information is needed concerning: the plant health conditions in agrocenoses; the appearance, spread, density, development, level of infestation and anticipated losses caused by pests; the relations between harmful and beneficial flora and fauna; the effect of plant protection actions carried out; and the accuracy of the analysis performed. The implementation of preventive or restorative measures based on forecasting will further reduce the risks to human health and the environment. Data from forecasting must also be taken into account when setting the optimal times for the implementation of agrotechnical actions in different districts.

The organisation of a system for monitoring, examination, forecasting and warning for economically significant agricultural crop pests, and the establishment of optimum schedules and agents to combat pests, have always been a matter of State policy, previously implemented by the former National Plant Protection Service and its regional structures (now BFSa and the RFSDs).

The plant protection inspectors responsible for the above actions are agronomists who are university graduates and have passed the required qualifying training courses. Since the dynamics of pest development and the level of infestation play a large role in determining agricultural yields, plant protection inspectors must have a full understanding of the biology of pests and of the aetiology of pathogens so that they can determine accurately the existing pest reserves in a given district and the qualitative status of the pest population. Visual diagnostics and on-site advisory services at the agricultural producer's premises constitute an essential independent means for determining the level of infestation and the exact time to carry out chemical control measures in a specific crop area. A public register shall be kept of the persons offering advisory services on the integrated pest management in accordance with Article 6(1)(9)(c) ZZR.

Under the terms of the ZZR, the BFSA issues bulletins with information on the appearance, development and spread of economically significant agricultural crop pests and the means to control them. The information gathered from pest monitoring is summarised, analysed and presented by the BFSA and RFSD in 'Bulletins on the appearance, spread, density, development and level of infestation of agricultural pests and schedule and methods of pest control'. The bulletins contain information on the biology, phenology and control of economically significant pests within a given region. Indicating the precise time when chemical control is to be carried out increases spraying efficacy and reduces the unnecessary use of pesticides. In order to prevent any unauthorised application of plant protection products the bulletins list PPPs that are authorised for use to control the corresponding pests. The bulletins also notify farmers of any changes to the regulatory framework, newly found pests in the country and the methods of controlling them, as well as forthcoming training courses, seminars and working meetings.

Plant protection products are an integral part of modern agricultural crop cultivation technologies. To limit the use of chemical methods of plant protection, plant protection products must be used only when there is a proven need. One important condition to ensure that the correct decision is made is to set economic damage thresholds (EDT) for the main pests and agricultural crop diseases. Damage to plants is a non-standard measuring unit, and this means that an EDT scale needs to be worked out for each pest, which should reflect the particular features of the pests of one population under specific conditions.

The methods used to record pest density levels need to be further improved and simplified. Where appropriate, direct recording is to be replaced by indirect indicators, which may be adopted as an EDT, for example, the percentage of infested or damaged crops.

One important component of integrated plant protection is the use of mathematical models for pest forecasting. Models are especially useful for the study of agricultural ecosystems and may be used to forecast their development. These forecasting methods provide professional users with an opportunity for better decision-making and help determine the precise time for the deployment of chemical control measures. It is essential that mathematical models are produced for pest forecasting, beginning with the development of mathematical models for the forecasting of certain key pests.

In accordance with Article 14 of Directive 2009/128/EC and Article 55 of Regulation (EC) No 1107/2009, compliance with the general principles of integrated pest management was introduced as a mandatory requirement as of 2014 with the ZZR.

The application of the general principles of integrated pest management by all agricultural producers led to a more targeted use of the available pest control measures and a reduction in the dependence on pesticides.

General principles of integrated pest management:

1. Protection from pests and/or their restriction should be achieved or facilitated mainly by:
 - crop rotation,

- implementation of appropriate agronomic measures (for example, stale seedbed technique, sowing dates and densities, optimum distance between crops, anti-erosion treatments, sanitary measures and pruning),
- use of suitable resistant/tolerant plant varieties and standard/certified seeds and planting material,
- application of balanced fertilisation, liming and irrigation and drainage practices,
- preventing the spreading of harmful organisms by hygiene measures (e.g. by regular cleansing of machinery and equipment),
- protection and enhancement of important beneficial organisms, e.g. by adequate appropriate plant protection measures or the utilisation of ecological infrastructures inside and outside production sites;

2. Pests must be monitored by adequate methods and tools. Such methods should include scientifically sound warning, forecasting and early diagnosis systems, as well as the use of advice from professionally qualified advisers.

3. Based on the results of the monitoring, the professional user has to decide whether and when to apply plant protection measures. The economic damage thresholds established are a key factor in decision making. Economic damage thresholds defined for the region, specific areas, crops and particular climatic conditions must be taken into account before treatments, where feasible.

4. Sustainable biological, physical and other non-chemical methods must be preferred to chemical methods if they provide satisfactory pest control.

5. The pesticides applied must be as specific as possible for the target and must have the least side effects on human health, beneficial organisms and the environment.

6. The professional user should keep the use of pesticides and other forms of intervention to levels that are necessary, e.g. by reduced doses, reduced application frequency or partial applications (for example band application or spot application), considering that the level of risk in vegetation is acceptable and they do not increase the risk for development of resistance in populations of harmful organisms

7. Where the risk of resistance against a plant protection measure is known and where the protection of the crop requires repeated application of pesticides, available anti-resistance strategies should be applied to maintain the effectiveness of the products. This may include the use of multiple pesticides with different modes of action.

8. Based on the records on the use of pesticides and on the monitoring of harmful organisms the professional user should check the success of the applied plant protection measures.

For the protection of agricultural crops the specific principles of integrated pest management may also be applied, in line with which the integrated production of plants and plant products is carried out.

Specific principles of integrated pest management:

The specific principles of integrated pest management are set out in the guides.

The integrated production of plants and plant products is aimed at reducing the impact of using plant protection products on human and animal health and the environment, and encompasses:

- priority application of biological, physical and non-chemical methods, means and products for plant protection with a low risk to human and animal health and to the environment;
- substitution of plant protection products by mechanisms for the natural regulation of economically significant agricultural product pests.

Under the terms of the ZZR, farmers who produce certain plants and plant products using integrated production methods must do so in accordance with the Integrated Pest Management Guides for a continuous period of five years. Farmers may not, during this five-year period, produce the same plants and plant products using a different form of agricultural production.

Producers carrying out integrated production of plants and plant products are monitored by the Bulgarian Food Safety Agency.

The Bulgarian Food Safety Agency sets up, maintains and stores a national database on the appearance, spread, density, development and level of infestation of economically significant agricultural product pests. The national database may be used as a basis for setting up and maintaining an internet portal on plant protection, where professional users can obtain data and information necessary for decision-making. This includes information on agroecological areas (AER) in respect of crops (phenophases for AER), pests (development phase), reported density, EDT and trends. The national plant protection database is an independent source for the provision of specialised information, accessible to distributors, advisors and agricultural producers.

ACTIONS under Measure 6:

- 1) Updating of the integrated pest management guides.
Deadline: 1 year after entry into force of the Regulation on Integrated Production.
Responsible institution: BFSA
- 2) Updating, on a scientific basis, the economic damage thresholds for the main crops ‘Economic damage thresholds for the main agricultural crop adversaries and diseases’.
Deadline: as needed
Responsible institution: BFSA and others
- 3) Use of advisory services for integrated pest management.
Deadline: as per the ZZR
Responsible institution: BFSA, individuals providing IPM advisory services
- 4) Maintenance of a public register of persons who are registered and offer integrated pest management advisory services.
Deadline for setting up the register: as per the ZZR
Deadline for register maintenance: ongoing
Responsible institution: BFSA
- 5) Maintenance of registers of agricultural producers carrying out integrated production of plants and plant products – by RFSDs for the relevant regions and by the BFSA Central Administration for a national register which holds the data from the regional registers.
Deadline for setting up the register: as per the ZZR
Deadline for register maintenance: ongoing
Responsible institution: BFSA, RFSD
- 6) Integrated production control and gathering of information on the crops cultivated and the cultivation areas.
Deadline: ongoing
Responsible institution: BFSA, RFSD
- 7) Conducting information campaigns on the general principles of IPM.

- Deadline: ongoing
- Responsible institution:* *BFSA, RFSD, associations of agricultural producers*
- 8) Introduction of a legal obligation for agricultural producers to store documentation on each use of a biological agent.
- Deadline: in accordance with the Ordinance referred to in Article 104 ZZR
- Responsible institution:* *BFSA, RFSD*
- 9) The general principles of integrated pest management are to be applied for the protection of agricultural crops.
- Deadline: ongoing
- Responsible institution:* *BFSA, farmers*
- 10) For the protection of agricultural crops the specific principles of integrated pest management may also be applied, in line with which the integrated production of plants and plant products is carried out.
- Deadline: ongoing
- Responsible institution:* *BFSA, farmers*
- 11) In protecting agricultural crops from economically significant pests by means of integrated pest management, following the assessment and recommendation of an integrated production advisor, a farmer may apply a plant protection product in a dose that is lower than that authorised, provided that the efficacy of the product in that dose has been proven and that there is no risk of resistance developing, to reduce the risks and impact of pesticide use on human health and the environment, and to maintain pest populations below the EDT.
- Deadline: when there is a justified opportunity
- Responsible institution:* *integrated production advisor*
- 12) Areas for organic farming – agricultural land managed in an organic manner.
- Responsible institution:* *MAFF, NGOs*
- 13) Establishment of priority items such as active substances, crops, regions or practices that require special attention, or good practices in terms of reducing the risks and impact of pesticide use on human health and the environment.
- Deadline: ongoing
- Responsible institution:* *MAFF, agricultural pharmacies*
- 14) Identification of active substances of particular concern, persistent or high-risk active substances (toxic, highly toxic, bio-accumulative, carcinogenic, mutagenic, reproductively toxic, endocrine disruptors) for which there are safer alternatives and substituting them by alternatives (list of active substances that are candidates for substitution, in line with Article 24 of Regulation 1107/2011). The list of active substances that are candidates for substitution is available in part B of Regulation 540/2001 and is valid for all EU Member States.
- Deadline: as per Regulation No 540/2011
- Responsible institution:* *BFSA, RACFC*
- 15) Creating and maintaining an internet portal on plant protection
- Deadline: ongoing

Responsible institution: ARIB, specialised agricultural websites (www.nivabg.com and others)

- 16) Introduction and use of advisory systems and mathematical models to forecast the development of key pests for agricultural crops that are of strategic significance for the country.

Deadline: ongoing

Responsible institution: agricultural pharmacies, universities

EXPECTED RESULTS of Measure 6:

1. Reduction of the risks and impact of pesticide use on human health and the environment by achieving a balance between ecological and economic needs when plant protection products are used.
2. Production and placing on the market of safe, good-quality plant products.
3. Compliance with the principles of integrated pest management involves restricting the use of plant protection products to the essential minimum and applying alternative plant protection approaches or methods.
4. Raising awareness and sustaining the interest of agricultural producers in the integrated production of plants and plant products and in making the transition to organic production.
5. Preventing pests from becoming resistant to plant protection products.
6. Reducing farmers' expenditure on plant protection products.

MEASURE 7 REDUCING THE LEVELS OF PESTICIDE RESIDUES IN FOODS OF PLANT ORIGIN (PRODUCED IN BULGARIA)

ASSESSING THE RISK TO CONSUMERS RESULTING FROM PESTICIDE RESIDUES IN FOODS

The incorrect application of plant protection products in agriculture, in particular the violation of the quarantine time periods for PPPs, leads to increased levels of their residues in the environment and in food. It is of particular importance that the residue levels in food products are safe for consumers, which means they should be as low as possible. The presence of pesticide residues above the permitted levels represents a risk to consumers' health and may have serious adverse effects if not strictly controlled.

To regulate residue levels, the European Union (EU) has introduced **Maximum Residue Levels (MRLs)** of pesticides that constitute the maximum permitted level of concentration of pesticide residue in or on food or feed, based on good agricultural practice and the lowest consumer exposure needed to protect vulnerable consumers. The European Food Safety Authority (EFSA) is the main responsible body for the harmonisation of MRL values in the individual Member States. As a member of the EU, Bulgaria must ensure that MRLs are observed and monitored.

Exceeding the MRL does not always mean that a product presents a health risk or is unfit for consumption. The MRL is not the toxicological risk boundary but rather is set on the basis of the maximum level of pesticide residues in a given crop. The identification of pesticide residues exceeding the set MRL value in a given product is an indication that the relevant good plant protection practice was not observed during production; however, long-term and short-term (acute)

exposure assessments are needed in order to establish whether there is a toxicological risk to consumers.

Dietary exposure of consumers to foods in which excessive levels of residues are detected is assessed with the help of the European Pesticide Risk Assessment Model (PRIMo) developed by EFSA experts. This model links the results of pesticide residues assessment to food consumption data in EU Member States and World Health Organisation cluster diets and includes at-risk and especially sensitive population groups (the model differentiates between risks for adults and for children, since the latter are a more vulnerable consumer group). The risk from ingesting a given contaminated food product depends to a large extent on the amount ingested by the given consumer group, which is reflected in the diet.

To ensure that MRLs are observed Member States are required to carry out official control of pesticide residues. As an EU Member State, Bulgaria is also under obligation to carry out product control, in line with national and European control programmes. The data obtained from the individual states are sent to the EFSA, which includes them in its annual reports on pesticide residues.

CONTROL OF PESTICIDE RESIDUES IN FOOD OF PLANT ORIGIN

Pesticide residues in food of plant origin, both imported and produced in Bulgaria, need to be monitored in order to protect consumers from health risks arising from the presence of such residues.

As an EU Member State, and in accordance with the provisions of Regulations (EC) No 178/2002, 882/2004 and 396/2005, Bulgaria draws up and implements on an annual basis a National Programme for the Control of Pesticide Residues in and on Foods of Plant and Animal Origin, which provides for sampling on the basis of a risk assessment and sampling in line with Commission Implementing Regulation (EU) No 2017/660 of 6 April 2017 concerning a coordinated multiannual control programme of the Union for 2018, 2019 and 2020 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.

The control programme is aimed at ensuring the correct application of plant protection products that are authorised for use, in line with Good Plant Protection Practice.

The aim is to assess the level of pesticide residues in plant products when they are harvested and the degree of compliance with the maximum residue levels set; and to ensure the correct application of plant protection products that are authorised for use (application doses, quarantine periods, use solely for the purposes for which they are authorised).

The objective of the control programme is to reduce the number of abuses associated with excessive doses, failure to observe quarantine periods or use of prohibited pesticides.

The choice of agricultural products is based on a rotation principle for products of plant origin consumed in the greatest quantities in a typical Bulgarian diet, and takes into account the results of product testing from previous years, the economic significance of the products, the requirements of the Regulation and the recommendations of the European Commission for the monitoring of pesticide residues in food each year, with the aim of protecting the health of consumers from an undue risk of pesticides.

The programme covers mainly agricultural areas and crops where there is intensive use of plant protection products. Samples of plant products are taken at their place of production (field, greenhouse), during harvesting and prior to marketing, by trained RFSD inspectors and in full compliance with the provisions of Directive 2002/63/EU.

NATIONAL REFERENCE LABORATORIES FOR THE ANALYSIS OF PESTICIDE RESIDUES

The national reference laboratories (NRL) used by the Bulgarian Food Safety Agency for the analysis of pesticide residues in and on food of plant and animal origin are the Central Laboratory for Chemical Testing and Control (CLCTC) and the Central Laboratory for Veterinary Sanitary Expertise (CLVSE).

The CLCTC is the national reference laboratory for pesticide residues in fruit and vegetables. It has a fully-developed and functioning management system (MS). It is accredited in accordance with the requirements of Bulgarian State Standard EN ISO/IEC 17025 by the Bulgarian Accreditation Service Executive Agency for the analysis of pesticide residues in plant raw materials and products.

When pesticide residues above the maximum permitted levels are found in samples of food products, the Risk Assessment Centre for the Food Chain carries out an assessment of consumer exposure and, depending on the findings, decides on the manner of the subsequent marketing of the product – for consumption or for non-food purposes - or on its destruction.

ACTIONS under Measure 7:

- 1) Strengthening control of pesticide residues in plants and plant products for use as food– by taking and analysing a representative number of field and greenhouse samples from a larger number of crop types.

Deadline: ongoing

Responsible institution: *BFSA, CLCTC*

- 2) Enhanced monitoring of plant protection product use, by taking and analysing field or greenhouse leaf samples to identify PPPs used.

Deadline: ongoing

Responsible institution: *BFSA, CLCTC or an external accredited laboratory*

- 3) Expanding the range of active substances analysed, by developing and validating new methods of analysis and purchasing new equipment in order to ensure that analyses are carried out within the scope required under the terms of the control programme for pesticide residues coordinated by the EU.

Deadline: ongoing

Responsible institution: *CLCTC or external accredited laboratory*

- 4) Carrying out a risk assessment of food of plant origin with pesticide residues detected above the MRL.

Deadline: ongoing

Responsible institution: *RACFC*

- 5) Publication on the RACFC website of information relating to pesticide pollution of food of plant origin.

Deadline: ongoing

Responsible institution: *RACFC*

EXPECTED RESULTS of Measure 7:

1. Reduction of pesticide residues in food of plant origin (produced in Bulgaria), contributing significantly to the preventive protection of consumers.
2. Increased consumer interest and demand for Bulgarian plant products.
3. Increased consumer trust – safe products.

MEASURE 8 SPECIAL MEASURES TO PROTECT THE AQUATIC ENVIRONMENT AND DRINKING WATER

Since the aquatic environment is especially sensitive to pesticides, it is necessary to prevent pollution of surface and groundwater by taking appropriate steps to reduce the exposure of water bodies to spray drift, drain flow and run-off. Similarly, the observance of appropriately-sized buffer zones around water bodies is a useful preventive action to protect the aquatic environment and drinking water. The dimensions of buffer zones should depend on soil characteristics and pesticide properties, as well as agricultural characteristics of the areas concerned etc. Use of pesticides in the areas for the abstraction of water intended for drinking and household use, on or along transport routes such as railway lines or on sealed or very permeable surfaces can lead to higher risks of pollution of the aquatic environment, and therefore actions need to be taken to reduce the use of pesticides in such areas as far as possible, or eliminate such use.

The national legislation currently in effect lays down the following main requirements in respect of measures to protect the aquatic environment and drinking water:

- requirements for the quality of water intended for drinking and household use; Annex No 1, Table B ‘Chemical indicators’, to Regulation No 9 of 16 March 2001 on the quality of water intended for drinking and household use sets a maximum value for pesticides of 0.1 µg/l for each individual active substance, metabolite or reaction product, and 0.5 µg/l for total pesticides, as the sum of the concentrations of all the individual pesticides identified in the monitoring process, determined quantitatively. The maximum value for aldrin, dieldrin, heptachlor and heptachlor epoxide is 0.03 µg/L;
- requirements for the quality of fresh surface water that, following suitable treatment, is to be used as, or is a possible source for, water for drinking and household use; the requirements apply to all water from surface water sources delivered via water mains for drinking and household use; Annex No 1 ‘Requirements for the quality of surface water intended for the abstraction of drinking water’ to Regulation No 12 on the quality requirements for surface water intended for drinking and household use sets the mandatory value for the indicator ‘pesticides – total’ for surface water of categories A1, A2 and A3, as follows: The mandatory value for category A1 is 0.001 mg/L; The mandatory value for category A2 is 0.0025 mg/L; The mandatory value for category A3 is 0.005 mg/L;
- prohibitions and restrictions, including those relating to the application of pesticides in the different belts of safeguard zones, are set out in Regulation No 3 of 16 October 2000 on the conditions and procedures for the study, design, ratification and exploitation of safeguard zones around water sources and equipment for drinking and household use and around sources of mineral water used for therapeutic, prophylactic, drinking and hygiene needs;
- requirements for surface water regulated by Annex No 2, part A ‘Environmental quality standards’ of the Regulation on environmental quality standards for priority substances and certain other pollutants (e.g. the maximum permitted concentration for the substances atrazine, endosulfan, trifluralin, chlorpyrifos/chlorpyrifos-ethyl, etc.);
- requirements for groundwater; Annex No 1 ‘Groundwater quality standards’ to Regulation No 1 of 10 October 2007 on the exploration, use and protection of groundwater, sets out the

following quality standards for groundwater: for pesticides – 0.1 µg/L for each individual active substance; for total pesticides – 0.5 µg/L as the sum of the concentrations of each individual pesticide; for aldrin, dieldrin, heptachlor and heptachlor epoxide – 0.03 µg/L;

- Water Protection Zones, as specified in the Water Act, are set out in the River Basin Management Plan, which lists the measures and deadlines for achievement of the objectives for a specific water protection zone.

The Ministry of Environment and Water and its Basin Directorates (BDs) and the Environmental Executive Agency (EEA) are the competent authorities for the implementation of monitoring programmes on water quality.

The Ministry of Health and its regional health inspectorates are the competent and control bodies with regard to the water suppliers' compliance with their obligations to provide the population with drinking water and water for household use compliant with the requirements and to carry out in full the necessary monitoring of drinking water quality.

Through the EEA, the Ministry of the Environment and Water monitors underground and surface water in line with the Water Monitoring Order of the Ministry of the Environment and Water, including water monitoring in water protection zones. This monitoring is part of the National Water Monitoring System. The National Water Monitoring System is the main source of information on water quantity and quality. The water monitoring system identifies the causes of surface and groundwater pollution (total pollution, toxic substances, nutrients, etc.) and the pollution sources (point and diffuse), determines the efficacy of various monitoring programmes and identifies water quality trends and the measures to be taken to improve water quality.

The main legislation at European level governing water is Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, also known as the Water Framework Directive. The Water Framework Directive sets the requirements for water with a view to attaining a good status for all water and water protection zones by 2015. The main strategic objective of the Water Act is to ensure adequate quantity and good quality of water used for various purposes.

➤ **Surface water monitoring**

The monitoring of surface water quality and the evaluation of the results obtained provides an opportunity to carry out a characterisation of the chemical status of rivers, reservoirs, lakes and the Black Sea. Each point in the monitoring network characterises a particular section of a river that may be polluted by agriculture and other contaminants.

The total number of points in Bulgaria is 533, and these are distributed over four Basin Directorates – the Danube District, the Black Sea District, the Eastern Aegean District and the Western Aegean District.

The indicators monitored are divided into three main groups – basic physical/chemical, priority substances and specific pollutants, their monitoring frequency ranging from 4 to 12 times a year. Approximately 22 to 30 indicators are tested.

MONITORING OF SURFACE WATER FOR THE SUPPLY OF WATER FOR DRINKING AND HOUSEHOLD USE

Pesticide monitoring in water from surface sources used to supply water for drinking and household use is carried out by the Basin Directorates via the EEA regional laboratories and the water and sanitation companies. The Basin Directorates draw up programmes for control and self-monitoring of drinking water.

The sampling frequency is between 1 and 12 times per year, depending on the size of the

population served by the water source.

➤ **Groundwater monitoring**

The groundwater monitoring networks comprise 292 points for the control and operational monitoring of the chemical status of groundwater and monitoring points for the water protection zones. Analyses are carried out for the following groups of indicators:

1. Physical/chemical:

- Group I – main physical/chemical indicators;
- Group II – additional physical/chemical indicators.

2. Specific pollutants:

- Group I – metals and metalloids;
- Group II – organic substances, including pesticides.

The main physical/chemical indicators are sampled 2 to 4 times a year, and the additional physical/chemical indicators 1 to 4 times a year; metals and metalloids are sampled 1 to 2 times a year and organic substances (including pesticides) once a year.

Pesticide monitoring is not planned or carried out for all groundwater monitoring points; pursuant to Order No RD-715/02.08.2010, pesticides are tested for at 119 groundwater monitoring points.

The monitoring network which keeps track of the quantitative status of groundwater (where levels of wells and the yields of springs and artesian wells are measured) does not, as far as the majority of points are concerned, match up with the monitoring points for chemical status, and is serviced by the National Meteorology and Hydrology Institute. The EEA (via the regional laboratories) takes measurements of levels and yields only at a small proportion of monitoring points, where sampling for chemical testing is also carried out.

To protect groundwater from pollution, an assessment is made of the risk posed to groundwater bodies by relevant point and diffuse sources – in the river basin management plans (RBMPs). In this way, the water bodies that are at risk of not fulfilling the objectives under Article 4 of the Water Framework Directive are identified. Risk assessments and the development of monitoring networks for the chemical and quantitative status of groundwater are carried out on the basis of a conceptual model (understanding) for each individual groundwater body and action programmes are planned in the RBMP where there is a proven risk or an upward trend in concentrations of certain groundwater pollutants. Groundwater is considered from the point of view of the receptors that may be exposed to risk – aquatic or terrestrial ecosystems – or from the point of view of human health (drinking water supply, irrigation, etc.) for the setting of quality standards or threshold values for various pollutants. Agricultural activities, residential areas without sewage systems, etc. are considered as diffuse pollutants; point sources of pollution of groundwater include landfills, mines, spoil heaps, tailings ponds, and others.

The Ministry of Health carries out monitoring of drinking water (mainly at points at the tap of the end user and exceptionally at other points of the water distribution network), bathing water and mineral water.

The main legislative acts at European level in respect of drinking water, bathing water and mineral water are:

- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption
- Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral water

- Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs

➤ **Control of drinking water**

The competent authority for drinking water is the Ministry of Health and its 28 regional structures – the Regional Health Inspectorates.

Monitoring of drinking water quality in its full scope is the responsibility of the water supply organisations, in their capacity as suppliers of water for drinking and household use. The Regional Health Inspectorates carry out monitoring checks.

The specific measures to protect the aquatic environment and drinking water from the impact of plant protection products are set in accordance with the provisions of the Water Act and Regulation (EC) No 1107/2009, and are part of the Programmes of Measures included in the River Basin Management Plans. The measures include:

- giving preference to plant protection products which:
 - are not classified as hazardous to the aquatic environment, in accordance with Regulation (EC) No 1272/2008;
 - do not contain priority hazardous substances as defined under the Water Act;
- giving preference to the most effective methods of application, using equipment for the application of plant protection products with reduced spray drift, especially for hop gardens, fruit orchards and vineyards;
- minimising the risk of off-site pollution caused by spray drift, drain-flow and run-off, including by establishing
 - untreated buffer zones next to surface waters in order to protect non-target aquatic organisms: buffer zones are to be set on an individual basis for each plant protection product during the assessment and authorisation procedure and are to be stated on the product label;
 - prohibitions and restrictions on actions with plant protection products in safeguard zones for surface water and groundwater for drinking and household use.
- reducing or eliminating the applications of plant protection products on or along roads, railway lines, very permeable surfaces or other infrastructure close to surface water or groundwater, or on sealed surfaces with a high risk of run-off into surface water or sewage systems.

ACTIONS under Measure 8:

In respect of drinking water:

- 1) Monitoring drinking water quality.

Deadline: ongoing

Responsible institution: Water and sanitation operators (full scope); Regional Health Inspectorates (monitoring control)

- 2) Monitoring surface water and groundwater for drinking and household use.

Deadline: ongoing

Responsible institution: MOSV, BDs, EEA, water and sanitation operators

- 3) Improving the collection and the exchange of information on the types and quantities of pesticides used on the territory of surface water protection zones and groundwater protection zones or parts thereof which appear on the surface, especially those formed in karstic and fissure aquifers.

Deadline: ongoing from 2014

Responsible institution: BFSA, MOSV, BDs

- 4) Publishing on the websites of the Ministry of the Environment and Water and the Basin Directorates of information on the designated safeguard zones for drinking water sources in the form of zone registers. It should be borne in mind that under Article 119a(1) and (2) of the Water Act.

Deadline: ongoing

Responsible institution: MOSV, BDs

- 5) Improving controls on compliance with the requirements for the prohibition and restriction of pesticide use in safeguard zones.

Deadline: from date of entry into effect of the ZZR

Responsible institution: legal entities operating water sources

In respect of the aquatic environment

- 6) Giving preference to plant protection products, in accordance with the ecotoxicological assessment carried out when authorising the product and the Authorisation for Placing on the Market and Use of PPPs (CLP classification), which are not classified as hazardous to the aquatic environment, in line with Regulation (EC) No 1272/2008, and which do not contain priority hazardous substances as defined in the Water Act. Information on the CLP classification can be found on the product's label.

Deadline: ongoing

Responsible institution: BFSA, the plant protection industry, associations of agricultural producers, and others

- 7) Giving preference to the most effective methods of application, such as the use of equipment for the application of plant protection products, in line with Regulation No 5 of 3 February 2016 on the periodic inspections of the equipment for the application of plant protection (published in SG No 11 of 9.2.2016), such as the use of application equipment with reduced spray drift, especially for hop gardens, fruit orchards and vineyards.

Deadline: ongoing

Responsible institution: The Control and Technical Inspectorate of the General Directorate for Agricultural and Regional Policy at the MAFF, associations of technical equipment traders, farmers associations and others.

- 8) Minimising the risk of off-site pollution caused by spray drift, drain-flow and run-off, including the establishment of untreated buffer zones of a suitable size to protect non-target aquatic organisms: buffer zones are to be set on an individual basis for each plant protection product during the assessment and authorisation procedure and are to be stated on the product label.

Deadline: ongoing

Responsible institution: BFSA, agricultural producers, farmers associations, others

- 9) reducing or eliminating the application of plant protection products on or along highways, railway lines, highly permeable surfaces or other infrastructure close to surface water or groundwater, or on sealed surfaces with a high risk of run-off into surface water or sewage systems.

Deadline: as per the ZZR

Responsible institution: BFSA

- 10) Farmers and farmers associations must comply with the prohibitions and restrictions on plant protection product use in protection zones for water intended for drinking and household use and mineral water, and in safeguard zones for surface water and groundwater intended for drinking and household use.

Deadline: ongoing

Responsible institution: Farmers, farmers associations, others

- 11) Prohibition of the use of professional-category plant protection products in protection zones designated in the Water Act, or other areas designated by order of the Minister for the Environment and Water. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.

Deadline: as per the ZZR

Responsible institution: BFSA

- 12) Ensuring integrated water management in the public interest and to protect public health, along with the conditions needed to reduce the release of priority substances and priority hazardous substances, in line with the Water Act.

Deadline: deadline specified in RBMP

Responsible institution: MEW, BDs

- 13) Monitoring surface water, in line with the Order of the Minister for the Environment and Water on water monitoring.

Deadline: ongoing

Responsible institution: BDs, EEA

- 14) Monitoring groundwater, in line with the Order on Water Monitoring of the Minister for the Environment and Water, taking into account [information about] the types of plant protection products used, provided by the BFSA for this purpose.

Deadline: ongoing

Responsible institution: BDs, EEA

- 16) Development and maintenance of an information system on plant protection products, their production/import, contents, quantity, place of application, type and imported quantities

Responsible institution: MAFF,

BFSA

- 17) Development and maintenance of an information system on spatial organisation, maintenance and provision of information on agricultural pressure (GIS-based information).

Responsible institution: MAFF, BFSA

EXPECTED RESULTS of Measure 8:

1. The implementation of measures to reduce the risks posed by pesticide residues in drinking water will decrease the pesticide risk and its impact on human health.
2. The prevention and/or reduction of water pollution by pesticides will reduce the risks and impact of pesticide use on human health and the environment.
3. The prevention and/or reduction of the risks posed by pesticide residues in water sources will reduce the risks and impact of pesticide use on human health and the environment.
4. Protection of water and of water protection zones.

MEASURE 9 ADDITIONAL MEASURES TO PROTECT THE ENVIRONMENT

To reduce the risks and impact of pesticide use on the environment, in addition to the requirement for special measures to protect the aquatic environment and drinking water, the National Action Plan for Sustainable Pesticide Use lays down a broader requirement, which is to protect the environment, and specifically to protect the environment by preventing and/or reducing pesticide pollution, not just of water but also of soil. Pesticide pollution of both water and soil will be prevented and/or reduced through measures and actions that have been implemented and that are set out in the National Plan in respect of mandatory initial and additional training of individuals who handle pesticides as part of their professional activities – professional pesticide users, distributors and advisors; mandatory inspection of pesticide application equipment in use; mandatory application of the general principles of integrated pest management by agricultural producers; prohibition of aerial spraying, etc.

The existing national legislation includes a requirement to monitor certain pesticides: persistent organic pollutants in the soil. The limit values for organic pollutants, including organochlorine pesticides, are laid down in Regulation No 3 of 1 August 2008 on limit values for harmful substances in the soil. According to Article 8 of Regulation No 4 on monitoring of soil, the National Soil Monitoring System is organised on three levels. Observation of different indicators is carried out at different levels. At the first level – extensive monitoring – observations are carried out for 8 (eight) persistent organochlorine pesticides (aldrin, DDT/DDD/DDE, dieldrin, endrin, alpha and beta-HCH, gamma-HCH (lindane), hexachlorobenzene (HCB), mirex and heptachlor). As of 2016, monitoring is carried out for a further four persistent pesticides – endosulfan, lindane, chlordecone and pentachlorobenzene, because of their inclusion in the Annexes to the Stockholm Convention and Regulation (EU) 2019/1021 on persistent organic pollutants. Extensive monitoring includes observations over an evenly distributed 16x16 km grid of farmland, with 397 points. The frequency of observations under extensive monitoring is every five years, in autumn.

Water monitoring programmes are described in measure ‘Special measures for protection of the aquatic environment and drinking water’.

ACTIONS under Measure 9:

- 1) Monitoring persistent organochlorine pesticides in soil, in line with soil monitoring schemes pursuant to an Order of the Minister for the Environment and Water.

Deadline: ongoing

Responsible institution: MEW, EEA

2) Organising monitoring to determine pesticide levels in soils in the area of undertakings producing such substances.

Deadline: ongoing

Responsible institution: EEA and RIOSV

3) Provision to MEW/BD of the results from the monitoring of pesticides in soils, in connection with the planning of surveillance monitoring of waters for the pesticides concerned, in the areas where soil pollution has been detected.

Deadline: ongoing

Responsible institution: EEA and RIOSV

EXPECTED RESULT of Measure 9:

Available information, analysis and assessment of the persistent organochlorine pesticide levels in soil, included in the Annual Report on the Status of the Environment.

Protection of the environment, in particular soil and water.

MEASURE 10 INFORMATION TO THE PUBLIC ON PESTICIDES-TREATED AREAS¹

Under Directive 2009/128/EC, when plant protection products are used, individuals who may be exposed to spray drift must be made aware of this.

To this end, when aerial spraying is being carried out, information is to be made available to the public concerning the authorisations that have been issued for aerial spraying, and in particular:

- the zone that is to be sprayed;
- the planned day and time of spraying;
- the type of plant protection product.

The BFSA maintains an aerial spraying register on its website, which is accessible by the public.

The conditions and procedures for the announcement of plant protection activities using land-based equipment and aerial spraying are laid down in the Plant Protection Act and Regulation No 13 of 2016 on the measures to protect honey bees and honey bee swarms from poisoning and ways to carry out plant protection, disinfection and insecticidal activities.

The Regional Food Safety Directorates, via the mayor's office and local media, or by other appropriate means, disseminate information on the pending application of PPPs using ground equipment or aerial spraying.

Persons who carry out/assign plant protection, disinfectant and insecticidal activities with land-based equipment or by aerial spraying must, within 3 days of the treatment date:

- inform in person (by SMS and/or email) the owners of farms (apiaries) registered under the Veterinary Practices Act and located in the territory of the settlement where the

¹ The description of measure "Information to the public on pesticides-treated areas" does not include the actions for implementation of the measure, as the actions under this measure are part of the actions to be carried out under measure 'Aerial spraying' and measure 'Reduction in pesticide use or risks in specific areas'. For this reason, measure 'Information to the public on pesticides-treated areas' does not list any expected results, since they are listed in measure 'Aerial spraying' and measure 'Reduction in pesticide use or risks in specific areas' in relation to the implementation of the actions under these two measures.

lands to be treated are located, as well as the owners of apiaries located in the adjacent localities, of the date and time the event is to take place.

- send a notification letter to the mayor of the municipality where the treatment will take place as well as to the mayors of localities adjacent to the treated areas.

The mayors must announce the upcoming treatment on the day of receiving the notification letter, through local media and by posting an announcement in a visible location in the respective settlement.

Plant protection products, disinfection and insecticidal preparations may be applied on agricultural and forestry crops and other areas using ground equipment:

1. in compliance with the following protection zones and clearances:
 - (a) not less than 50 m where the direction of the wind is opposite to the settlement and the apiaries;
 - (b) not less than 50 m where the direction of the wind is towards the settlement and the apiaries;
 - (c) from adjacent crops specified in the authorisation and indicated on the label of the plant protection products.
2. at a wind speed of no more than 5 m/s, where the PPP application equipment ensures a reduction in spray drift, and at no more than 2 m/s without such equipment.

➤ Plant protection products and disinfection and insecticide preparations may not be applied using ground equipment :

1. at a wind speed exceeding 5 m/s;
2. at air temperature measured in the shade exceeding 25 °C.

Plant protection products and disinfection and insecticide preparations may be applied on agricultural and forestry crops and other areas by aerial spraying:

1. following a written authorisation in accordance with the Plant Protection Act;
2. in compliance with the following protection zones and clearances:
 - (a) not less than 200 m where the direction of the wind is opposite to the settlement and the apiaries;
 - (b) not less than 800 m where the direction of the wind is towards the settlement and the apiaries;

➤ Plant protection products may not be applied by aerial spraying

1. at a wind speed exceeding 2 m/s for treatment with herbicides, desiccants and defoliant;
2. at a wind speed exceeding 5 m/s for treatment with insecticides, fungicides and growth regulators;
3. at air temperature measured in the shade exceeding 25°C.
4. in case of still air, for total herbicides
5. during temperature inversions.

The state of the meteorological elements characterising the weather at the time prior to treatment, and after the treatment itself, are to be recorded in the aircraft flight log.

- Treatment with insecticides and with disinfection preparations may be carried out via:

1. ground application: from sunset to 10:00 the following day;
2. aerial application: from sunrise to 10:00.

It is not permitted to apply plant protection products, disinfection and insecticide preparations to areas with flowering vegetation, pastures and water abstraction zones, as well as outside the buffer zones designated during the authorisation procedure for plant protection products.

The contracting entity for plant protection, disinfection and insecticidal activities is obliged to:

1. mow flowering vegetation in the rows between perennial plantations (orchards, vineyards and others) before the treatment, in line with Article 34 of the Apiculture Act;

2. provide storage for empty packaging from plant protection products and disinfection and insecticide preparations in dedicated and secured locations, and its management and treatment in line with the instructions on the label of plant protection products and in accordance with the Waste Management Act.

- Until the end of the quarantine period, treated areas where group 1 PPPs have been used must display warning signs saying ‘**POISON!**’ in visible locations along the access road.

MEASURE 11 INFORMATION AND AWARENESS RAISING CONCERNING THE IMPACT OF PESTICIDE USE ON HUMAN HEALTH AND THE ENVIRONMENT

The public needs to be better informed about the overall impact of pesticides and the potential risks associated with their use through awareness-raising campaigns, the provision of information on the website of the relevant administrative bodies or at the time of sale by PPP retailers, and other measures. In this connection, measures have been put in place to:

- inform the general public; encourage and facilitate information and awareness programmes; make available accurate and balanced information about pesticides, especially as regards the risks and possible acute and chronic poisoning, non-target organisms and the environment, and as regards the use of non-chemical alternatives;
- collect information concerning cases of acute poisoning caused by plant protection products and the development of chronic poisoning among groups that may be routinely exposed to plant protection products, such as professional users, operators, agricultural workers or people living near areas where plant protection products are used.

On the part of the plant protection industry, the Association for the Plant Protection Industry of Bulgaria (ARIB) initiates various actions aimed at making the general public aware of the risks involved in using illegal plant protection products. ARIB and the BFSA jointly organise training sessions and workshops with stakeholders to prevent the use and distribution of illegal products. Materials are published in specialised agriculture journals, discussions on the topic are organised to inform agricultural producers and the general public of the risks of using illegal and counterfeit pesticides for agriculture, human health and the environment. The activities focus on improving interaction among the institutions. The BFSA, together with the Customs Agency and the Ministry of the Interior, take part in international meetings and operations, in cooperation with the private sector and international bodies, which makes possible the exchange of information and practices in the common effort against illegal trade and the performance of joint actions and operations against the sale and use of illegal pesticides. The ARIB and the BFSA have proposed that all activities related to the production, marketing and cross-border transfer of unauthorised PPPs be criminalised. Specific texts for amendments to the Criminal Code have been sent by the ARIB to the MAFF. The illegal trade in pesticides can be restricted by introducing modern measures for the traceability of PPP sales from the supplier to the end user.

With a view to the provision of information, registers are being maintained and regularly updated on the websites of the BFSA, accessible at the following link:

http://bfsa.bg/bg/Object/site_register/view/4/%D0%A0%D0%B0%D1%81%D1%82%D0%B8%D1%82%D0%B5%D0%BB%D0%BD%D0%B0

In addition, electronic registers are kept at <http://pest.bfsa.bg/>.

The national electronic register on PPPs and fertilisers is also publicly available and the information therein concerning persons holding marketing and repackaging licences, marketing authorisations and authorisations for the use of PPPs is crucial so that PPP users, distributors and advisors, as well as other offices and departments, can have accurate and up-to-date information.

The national electronic register of sites includes:

1. Register 1: register of holders of certificates for PPP marketing and the respective PPP marketing sites;
2. Register 2: register of repackaged PPPs;
3. Register 3: register of PPPs authorised for marketing and limited and controlled use in Bulgaria, in accordance with Article 53 of Regulation (EC) No 1107/2009;
4. Register 4: register of adjuvants placed on the market and in use;
5. Register 5: register of PPPs for which an authorisation for use is being requested under Article 44 (3);
6. Register 6: register of authorisations issued for the application of a PPP by aerial spraying;
7. Register 7: register of persons providing specialised plant protection services;
8. Register 8: register of persons carrying out integrated production of plants and plant products;
9. Register 9: register of holders of a certificate under Article 83 ZZR.

ACTIONS under Measure 11:

- 1) Provision to the general public via the BFSA and RACFC websites of information on plant protection products, on the risks and possible acute and chronic consequences for human health, non-target organisms and the environment due to their use, and on the use of non-chemical alternatives.

Deadline: ongoing

Responsible institution: BFSA, RACFC

- 2) Annual reporting to the BFSA of all available information relating to the lack of expected efficacy, the development of resistance and to any unexpected effect on plants, plant products and the environment, and information from observations of the impact of a product on professional users.

Deadline: ongoing

Responsible institution: holders of an authorisation for placing on the market and use of plant protection products

- 3) Collection of information on cases of acute and chronic poisoning with plant production products.

Deadline: ongoing

Responsible institution: Ministry of Health through N.I Pirogov Hospital (after 1.6.2015).

EXPECTED RESULTS of Measure 11:

1. Available information on cases of poisoning with plant protection products
2. Greater awareness among the general public, institutions, professional and non-professional users of pesticides, operators and agricultural workers, distributors of plant protection products and advisors of the impact of plant protection products on human health and the environment.
3. Reduction of the risks and impact of pesticide use on human health, through greater awareness on the part of the individuals listed above.

4. Increased knowledge within institutions and among users of the requirements for the sale and use of plant protection products.

5. Increased knowledge within institutions and among distributors and agricultural producers of the risk associated with the sale and use of unauthorised, illegal and counterfeit plant protection products.

MEASURE 12 REDUCTION OF PESTICIDE USE OR RISKS IN SPECIFIC AREAS

Use of pesticides can be particularly dangerous in very sensitive areas, such as Natura 2000 sites protected in accordance with Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. In other areas, for example, public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions, the risks arising from exposure to pesticides are considerable.

In view of this, the use of professional-category plant protection products is prohibited in:

- areas used by the general public or vulnerable groups, as defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions;
- protection zones designated in the Water Act, or other areas designated by order of the Minister for the Environment and Water;
- areas in which agricultural workers are at work at the same time as the treatment.

If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.

ACTIONS under Measure 12:

- 1) Prohibition of the use of professional-category plant protection products in areas used by the general public or vulnerable groups, as defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.

Deadline: as per the ZZR

Responsible institution: *BFSA, municipalities, local authorities*

- 2) Prohibition of the use of professional-category plant protection products in protection zones designated in the Water Act, or other areas designated by order of the Minister for the Environment and Water. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.

Deadline: as per the ZZR

Responsible institution: BFSA

- 3) Agricultural workers' access to areas treated with plant protection products shall be restricted for the period indicated in the products' instructions for use.

Deadline: as per the ZZR

Responsible institution: BFSA

ADDITIONAL ACTIONS:

- 4) All planned activities pursuant to the National Action Plan for Sustainable Pesticide Use that are to be implemented in protected areas must be consistent with the protection rules and restrictions introduced by the Protected Territories Act (ZZT), the designation orders and the management plans.

Deadline: ongoing

Responsible institution: MEW

- 5) Compliance with legislative requirements for the protection of bees and bee colonies from pesticide poisoning.

Deadline: ongoing

Responsible institution: MAFF, BFSA, accredited laboratories for analysis of pesticide residues in bees and in plant material

- 6) Implementation of additional measures to protect bees from pesticide poisoning.

Deadline: ongoing

Responsible institution: MAFF, BFSA, RACFC, associations of agricultural producers, the plant protection industry, beekeepers associations

EXPECTED RESULTS of Measure 12:

1. Prevention and/or reduction of the risks of pesticides use in public spaces and recreational areas, thereby ensuring the protection of the general public and vulnerable population groups.
2. Prevention and/or reduction of water and soil pollution by pesticides reduces the risks and impact of pesticide use on human health and the environment.
3. Reduction of exposure to pesticides and thus protection of agricultural workers.

EXPECTED ADDITIONAL RESULT

Prevention and/or reduction of the impact of pesticides on biodiversity and natural habitats, including soil biodiversity, non-target organisms, bees, etc.

VI. INDICATORS USED IN THE NATIONAL ACTION PLAN FOR SUSTAINABLE PESTICIDES USE

In accordance with Article 15 of Directive 2009/128/EC, harmonised risk indicators are to be introduced at the European level. Following their introduction, Member States may continue to use existing national indicators or adopt other appropriate indicators in addition to the harmonised indicators.

To determine the progress made with regard to the objectives laid down in the action plan and the corresponding measures, Bulgaria uses the following measurable quantitative indicators, divided into **3 groups** according to their ecological, health, social and economic impact:

I. Ecological and health indicators

1. Pesticide residues in food of plant origin

- 1.1. Number of samples taken and analysed for pesticide residues in food of plant origin.
- 1.2. Number of active substances analysed.
- 1.3. Number of crops from which samples are taken to be tested for pesticide residues in food of plant origin.
- 1.4. Number of samples analysed with pesticide residues below the maximum residue levels (MRL) detected in food of plant origin.
- 1.5. Number of samples analysed with pesticide residues above the MRL detected in food of plant origin.
- 1.6. Number of samples with more than one pesticide residue detected.
- 1.7. Number of samples analysed to identify the PPPs used.
- 1.8. Number of crops tested to identify the PPPs used.
- 1.9. Number of samples analysed with one or more prohibited active substances detected.
- 1.10. Number of samples analysed for which unauthorised use of PPPs was detected.
- 1.11. Number of risk assessments carried out for food with pesticide residue quantities found to be above the maximum residue level (>MRL).
- 1.12. Number of RASFF notifications concerning cases where the MRL was exceeded, leading to the withdrawal of food of plant origin from the market (as a % of all communications/warnings).

2. Pesticide residues in water

- 2.1. Number of samples taken and analysed for pesticide residues in drinking water and in water from surface and groundwater sources used for drinking and household use.
- 2.2. Number of samples analysed of drinking water and water from surface and groundwater sources used for drinking and household use with pesticides below the MRL detected.
- 2.3. Number of samples analysed of drinking water from surface and groundwater sources used for drinking and household use with pesticides above the MRL detected.
- 2.4. Total number of samples of surface water analysed for pesticide residue, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
- 2.5. Number of samples analysed with pesticide residues below the MRL detected in surface waters, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.

- 2.6. Number of samples analysed with pesticide residues above the MRL detected in surface waters, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
- 2.7. Total number of samples of groundwater analysed for pesticide residues, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
- 2.8. Number of samples analysed with pesticide residues below the MRL detected in groundwater, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.
- 2.9. Number of samples analysed with pesticide residues above the MRL detected in groundwater, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.

3. Pesticide residues in soil

- 3.1. Number of soil samples taken and analysed with an organochlorine residue level below the MRL detected, which are subject to annual monitoring by the EEA.
- 3.2. Number of soil samples taken and analysed with a persistent organochlorine residue level above the MRL detected, which are subject to annual monitoring by the EEA.

4. Pesticide application equipment

- 4.1. Pesticide application equipment that has passed inspection (as a % of the total number of items of pesticide application equipment).
- 4.2. Percentage of equipment mounted on aircraft inspected compared to total equipment subject to inspection.
- 4.3. Percentage of equipment mounted on trains inspected compared to total equipment subject to inspection.

5. Integrated pest management

- 5.1. Number of infringements found concerning the application of the general principles of integrated pest management.
- 5.2. Number of agricultural producers voluntarily applying specific IPM principles (area covered as a % of total cultivated area).
- 5.3. Number of farmers registered as organic farmers (as a % of the total number of farmers registered).
- 5.4. Area used for organic farming as a % of the total area cultivated.
- 5.5. Number of registered persons providing IPM advisory services.
- 5.6. Number of registered farmers carrying out integrated production of plants and plant products within the country.
- 5.7. Number of infringements found in connection with integrated production.
- 5.8. Number of information campaigns conducted, and number of brochures, posters, etc. concerning IPM.
- 5.9. Number of crops and number of pests for which economic damage thresholds (EDT) have been updated.
- 5.10. Number of updated guides on integrated pest management

6. Plant protection product control

- 6.1. Number of persons holding a marketing licence for PPPs. Number of PPP trading centres.
- 6.2. Number of persons holding a repackaging licence for PPPs. Number of PPP repackaging facilities

- 6.3. Number of registered persons carrying out specialised plant protection activities: fumigation and disinfection of seeds for sowing, number of sites.
- 6.4. Data relating to control activities on the plant protection product market.
- 6.5. Data relating to control activities on the use of plant protection products.
- 6.6. Number of legal infringements concerning the sale of and use of plant protection products (e.g. offer and sale of plant protection products by unauthorised persons; sale of professional use category plant protection products by persons who do not hold a licence; sale or use of prohibited plant protection products; other).

7. Aerial spraying

- 7.1. Number of written authorisations for aerial spraying.
- 7.2. Areas treated in hectares, per crop type
- 7.3. Number of reasoned refusals to issue an authorisation for aerial spraying, as a percentage of the number of applications.
- 7.4. Number of infringements during aerial spraying.
- 7.5. Number of on-the-spot checks of farmers for all authorisations issued for aerial spraying, during the spraying itself.

8. Pesticide poisoning of people

- 8.1. Number of cases of acute and chronic pesticide poisoning of professional users, operators and agricultural workers.
- 8.2. Number of cases of acute and chronic pesticide poisoning of residents and bystanders in zones where pesticides are used.

9. Pesticide poisoning of non-target organisms

- 9.1. Number of proven cases of pesticide poisoning of bees.
- 9.2. Number of proven cases of pesticide poisoning of animals, birds and other non-target organisms.

10. Areas used by the general public, protected territories and other specific areas (pursuant to Article 12 of Directive 2009/128/EC)

- 10.1. Number of infringements involving use of professional-category PPPs on areas used by the general public, protected areas and other specific areas (under Article 12 of Directive 2009/128/EC).
- 10.2. Number of infringements involving use of PPPs in protected areas and zones of the Natura 2000 ecological network for which a prohibition of pesticide use has been introduced.

II. Social indicators

- 1. Number of individuals trained by 26.11.2022.
- 2. Percentage of trained farmers out of the total number of registered farmers.
- 3. An annual increase by 5% of the number of trained farmers as a percentage of the total number of registered farmers until the goal of 100% trained farmers applying professional-category PPPs is achieved.
- 4. Number of certificates issued to professional pesticide users and advisors after 26.11.2017.

5. Number of certificates issued to distributors in agricultural pharmacies and warehouses after 26.11.2017.
6. Number of certificates and licences revoked after 26.11.2017.
7. Number of warnings from citizens about legal infringements relating to the sale and use of PPPs.
8. Number of reported cases of lack of expected efficacy, development of resistance and of any unexpected effect on plants, plant products or the environment, and information from observations of a product's impact on professional users.

III. Economic indicators

1. Infestation above the EDT of economically significant pests – areas, crops.
2. Declared calamity or epiphytotic outbreak – areas, crops.
3. Statistical data on PPP use.
4. Statistical data on PPPs placed on the market.
5. Number of cases found of illegal imports and trade in unauthorised PPPs.
6. Quantity of illegally imported and traded PPPs that have been detained, confiscated and seized.

The relevant competent authorities are responsible for collecting the information relating to the indicators listed and for data computation and analysis.

VII. FUNDING OF THE NATIONAL ACTION PLAN

The necessary funding to support the actions of state-financed organisations in implementing the National Action Plan is to be provided from the budget of the relevant ministries, within their expenditure ceilings.

VIII. DEADLINES

With regard to the National Action Plan, **deadlines have been set for implementation of the measures and actions laid down, as follows:**

1. Deadlines stipulated in EU law and in national law:

The legal deadlines concern the implementation of the commitments of the Member States under the national action plans, specifically:

- The National Action Plan must be reviewed at least once every five years, and the European Commission must be notified of all major amendments to it as soon as possible.

2. Deadlines for the implementation of actions laid down in the NAP:

Deadlines for the implementation of the actions laid down in the national action plan are listed separately for each action in Table 9 'Measures, actions, deadlines, indicators and expected results of the implementation of the National Action Plan for Sustainable Pesticide Use' in Chapter IX 'Reporting' of this Plan.

With timely implementation of the actions laid down in the NAP, it is expected that progress will be made on sustainable pesticide use in Bulgaria in the coming years.

IX. REPORTING

The Ministry of Agriculture, Food and Forestry, the Ministry of the Environment and Water and the Ministry of Health via the regional health inspectorates develop a system for collecting and analysing information relating to actions, measures and indicators set out in the National Action Plan for Sustainable Pesticide Use in their respective areas of competence. Each year, each competent State institution prepares, collects and analyses these data for the preceding year and presents them to the BFSa by 31 March of the current calendar year. If necessary, this information may also be requested from other competent organisations.

At least once every five years, the impact of the actions and measures applied under the National Action Plan for a specific period of time is evaluated and a report drawn up. The evaluation is based on the information obtained from each competent authority and organisation; its status is tracked, the results analysed and trends identified, and suggestions are made as to the amendments needed. The impact of the actions and measures under the National Action Plan is assessed by competent organisations, structures or individuals with a view to determining the degree to which the objectives of the Sustainable Pesticide Use Directive have been achieved.

Table 9 indicates the measures, actions, deadlines, indicators and expected results of the National Action Plan for Sustainable Pesticide Use.

TABLE 9: MEASURES, ACTIONS, DEADLINES, INDICATORS AND EXPECTED RESULTS OF THE IMPLEMENTATION OF THE NATIONAL ACTION PLAN FOR SUSTAINABLE PESTICIDE USE

Main objectives:

1. **Reduction of the risks and impact of pesticide use on human health and the environment.**
2. **Promotion of integrated pest management and alternative approaches or methods.**

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
1. Training						
1.1.	Introduction of a system for initial and additional training for individuals who handle pesticides as part of their professional activities (professional pesticide users, distributors and advisors);	Higher education institutions in the system of vocational education and training	as per the ZZR	Number of individuals trained by 2022 Percentage of trained farmers out of the total number of registered farmers. An annual increase by 5% of the number of trained farmers as a percentage of	High	Reduction in the risk and impact of the use of pesticides on human health and on the environment as a result of the provision and acquisition of specialist knowledge by professional users,

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				the total number of registered farmers until the goal of 100% trained farmers applying professional-category PPPs is achieved.		distributors and advisors.
1.2.	Certification system for professional pesticide users, advisors and PPP distributors	BFSA	ongoing for professional pesticide users, advisors and distributors	1. Number of certificates issued to professional pesticide users and advisors after 26.11.2017. 2. Number of certificates issued to distributors	High	
1.3.	Maintenance of a public register of holders of a certificate for working with professional-use plant protection products.	BFSA	ongoing (register maintenance)	after 26.11.2017 3. Number of certificates and licences revoked after 26.11.2017.	High	
2. Requirements for the sale of pesticides						
2.1.	Persons who trade in plant protection products must have ensured that: <ul style="list-style-type: none"> For each PPP trade warehouse there is at least one person with higher education in the agrarian sciences who holds a certificate under Article 83 ZZR for working with plant protection products of the professional user category. The person responsible for trade in PPPs in an agricultural pharmacy must hold a certificate under Article 83 ZZR. 	BFSA, PPP traders	for requirements for persons trading in PPPs: ongoing	1. Number of persons holding a trade licence for PPPs 2. Number of sites for trade in PPPs including agricultural pharmacies - PPP trade warehouses - 3. Number of persons holding a repackaging licence for PPPs. 4. Number	High	Compliance with all legal requirements and provisions relating to the sale of pesticides reduces the risks and impact of pesticide use on human health and the environment, as a result of PPPs only being sold and distributed by competent persons and by those with knowledge of

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
2.2	Persons at trading sites must be present when sales are made and must provide information on the use of plant protection products and the risks to human health, animals and the environment and safety instructions. When sales are made to non-professional users, information is to be provided on any hazards, exposure, proper storage, handling and application of the products and safe disposal of their waste in line with the Waste Management Act, and on low-risk alternatives.	BFSA, PPP traders and their associations	ongoing	of PPP repackaging facilities. 5. Number of registered persons carrying out specialised plant protection activities -fumigation	High	the potential impact and the proper way to use and store pesticides.
2.3	Plant protection products of the professional use category may only be sold to individuals who hold a certificate under Article 83 ZZR for working with plant protection products of the professional use category.	BFSA, MAFF National Statistical Institute	ongoing	-disinfection of seeds for sowing -Integrated pest management advisors 4. Data relating to control activities on the plant protection product market. Inspections carried out on the PPP market: 5. Number of legal infringements concerning the sale of plant protection products (e.g offer and sale of plant protection products by unauthorised persons; sale of professional use category plant protection products by persons who do not hold a licence; sale of unauthorised plant protection products; other). 6. Number of warnings from citizens on legal infringements relating to PPP sales. 7. Statistical data on PPPs placed on the market,	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				<p>quantity of PPPs in kg/active substance.</p> <p>8. Statistical data on the volume of production and sales of herbicides, insecticides and fungicides, expressed in kg of active substance, in accordance with the scope of the Industrial Production Nomenclature (Prodcom).</p>		
2.4.	Countering illegal pesticides	BFSA, Customs Agency, DG Border Police, ARIB, plant protection associations, farmers associations	ongoing	<p>1. Number of cases found of illegal imports and trade in unauthorised PPPs.</p> <p>2. Quantity of illegally imported and traded PPPs that have been detained, confiscated and seized.</p>		
3. 3. Handling and storage of pesticides and management of their packaging and remnants						
3.1.	Maintenance of a register of authorised PPPs on the BFSA website – PPP authorisation, label and safety information sheet in Bulgarian	BFSA	for register maintenance – ongoing	1. Data relating to monitoring of the use of plant protection products.	High	Reduction of the risks and impact of pesticide use on human health and the

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
3.2.	Regulation of the requirements for PPP storage warehouses of agricultural producers, in accordance with Regulation No 3 on the conditions and procedure for the production, placing on the market, trade, repackaging, transport and storage of plant protection products.	BFSA, MAFF National Statistical Institute	ongoing pursuant to the ZZR and the Regulation	<p>Inspections of farmers carried out</p> <p>2. Number of legal infringements relating to the use of plant protection products (e.g use of an unauthorised plant protection product; other).</p> <p>3. Number of non-compliances found during cross compliance checks relating to the use of PPPs (SMR10).</p> <p>4. Number of warnings from citizens on legal infringements relating to PPP use.</p> <p>5. total utilised agricultural area</p> <p>6. Number of registered farmers by year.</p> <p>7. Statistical data on the use of PPP, to be provided every five years.</p> <p>8. number of authorised AV.</p>		environment as a result of the proper use and storage of pesticides and the proper handling of the packaging and the unused working solution.
3.3	Implementation of a collection system for empty PPP packaging.	Plant protection associations MEW	ongoing as per the ZZR	Amount of empty PPP packages collected	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
3.4	Trainings on the safe use of PPPs carried out	Plant protection associations	ongoing	Number of trainings carried out	High	
3.5.	Application of the requirements of the Waste Management Act and control of the permits for the management of PPP waste (used, expired or unfit for use PPPs).	MEW RIOSV	ongoing	Carrying out checks of obliged persons holding permits for the treatment of PPP waste (used, expired or unfit for use PPPs) in accordance with the Waste Management Act.		
4. Inspection of the pesticide application equipment in use						
4.1.	Pesticide application equipment using ground machinery currently in use is subject to mandatory inspection with respect to the safety and protection of human health and the environment.	MAFF, Centres for Testing and Certifications (Ruse and Plovdiv)	one inspection before 26 November 2016; inspection every 5 years until 2020; inspection every 3 years after 2020	Pesticide application equipment that has passed inspection (as a % of the total number of items of pesticide application equipment).	High	Use of pesticide application equipment that has been inspected reduces the risks and impact of pesticide use on human health and the environment.
4.2.	Only ground-based pesticide application equipment that has passed inspection has been used after 26 November 2016.	MAFF, Centres for Testing and Certification (Ruse and Plovdiv)	new pesticide application equipment is subject to inspection within 5 years of its purchase	Number of effectiveness inspections of pesticide application equipment Percentage of inspected equipment in relation to the total number of equipment subject to inspection	High	
4.3.	PPP application equipment mounted on trains or aircraft is	MAFF, Centres for	pursuant to	Percentage of equipment	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
	subject to periodic inspections, as laid down in Regulation No 5/2016.	Testing and Certification (Ruse and Plovdiv)	Regulation 5/2016.	mounted on aircraft inspected compared to total equipment subject to inspection. Percentage of equipment mounted on trains inspected compared to total equipment subject to inspection.		
4.4.	Equipment for the application of plant protection products using aviation technology must undergo a technical review in line with the requirements of Regulation No 37 of 2000 of 19.10.2016 concerning aircraft operators carrying out specialised aviation works.	GD Civil Aviation Administration	ongoing	Number of annual inspections of the new equipment available for the various aircraft types carrying out aerial spraying and comparison of the specifications with those mounted on the aircraft Number of operators authorised to carry out aerial spraying	High	
5. Aerial spraying						
5.1.	Prohibition of aerial spraying of agricultural crops and other areas with plant protection products.	BFSA	ongoing as per the ZZR and Regulation No 13/26.08.2016	Article 107 (3) ZZR Regulation No 13 of 26 August 2016 on the measures to protect honey bees and honey bee swarms from poisoning and ways to carry out plant protection, disinfection and insecticidal activities.	High	Reduction of the risks and impact of pesticide use on human health and the environment as a result of the ban on aerial spraying and increase in the level of public awareness of aerial sprayings carried out; control of the ban on aerial spraying with PPPs and compliance with the requirement for granting derogations only when there is a proven need.
5.2.	Carrying out aerial spraying only with the written authorisation of the Director of the BFSA, in exceptional cases, where there are no other alternatives to protect plants and plant products from pests, or where there are clear advantages in terms of reduced impacts on human health and the environment as compared with land-based application of plant protection	BFSA RFSD	ongoing as per the ZZR	1. Number of written authorisations for aerial spraying. 2. Number of reasoned refusals to issue an	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results	
	products.			authorisation for aerial spraying, as a percentage of the number of applications. 3. Number of infringements during aerial spraying. 4. Treated areas in hectares, by type of crop - agricultural areas - forest areas - other areas			
5.3.	Establishment of specific conditions and special requirements for the authorisation of aerial spraying.	BFSA RFSD	ongoing as per the ZZR		High		
5.4.	Authorisation to use aircraft and equipment for aerial spraying of PPPs.	Ministry of Transport, Communication Technologies and Communications GD Civil Aviation Administration	ongoing		High		
5.5.	Control of the ban on aerial spraying of PPP.	BFSA	ongoing as per the ZZR		Number of on-the-spot checks of farmers for all authorisations issued for aerial spraying, during the spraying itself.		High
5.6.	Suspension of aerial spraying when irregularities and non-compliances are identified.	BFSA RFSD	ongoing as per the ZZR		Number of irregularities and non-compliances.		High
5.7.	Provision of information to the public on authorisations issued for aerial spraying, including the zone that is to be sprayed, the planned day and time of the spraying and the type of plant protection product. This information is to be disseminated by the regional food safety directorates via the mayor's office and local mass media, or by other appropriate means.	BFSA RFSD local authorities media	ongoing as per the ZZR				High
6. Integrated pest management							
6.1.	Updating of the integrated pest management guides.	BFSA RACFC	1 year after entry into force of the Regulation on Integrated	Number of IPM guides updated	High	1. Reduction of the risks and impact of pesticide use on human health and the environment by	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
			Production.			achieving a balance between environmental and economic needs when plant protection products are used.
6.2.	Updating of the scientific basis of the economic damage thresholds of major crops.	BFSA others	Each year as per the ZZR	Number of crops and number of pests for which the EDT is updated.	High	2. Production and placing on the market of safe, good-quality plant products.
6.3.	Use of advisory services for integrated pest management.	BFSA persons providing IPM advisory services	ongoing	Number of registered persons providing IPM advisory services. Increasing the number of advisors	High	3. Compliance with the principles of integrated pest management involves restricting the use of plant protection products to the essential minimum and applying alternative plant protection approaches or methods.
6.4.	Maintenance of a public register of persons who are registered and offer integrated pest management advisory services.	BFSA	for register maintenance – ongoing		High	4. Raising awareness and sustaining the interest of agricultural producers in the integrated production of plants and plant products and in making the transition to organic production.
6.5.	Maintenance of registers of farmers carrying out integrated production of plants and plant products – by the RFSD for the relevant regions and by the BFSA Central Administration for a national register which holds the data from the regional registers.	BFSA RFSD	for maintenance of registers – ongoing		High	5. Preventing pests from becoming resistant to plant protection products.
6.6.	Integrated production control and gathering of information on the crops cultivated and the cultivation areas.	BFSA RFSD	ongoing	1. Number of registered farmers carrying out integrated production of plants and plant products within the country. 2. Number of infringements found in connection with integrated production.	High	6. Reducing farmers' expenditure on plant protection products.
6.7.	Conducting information campaigns on the general principles of integrated pest management.	BFSA RFSD farmers associations,	ongoing	Number of information campaigns conducted, and number of brochures, posters, etc. produced on	Medium	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				IPM.		
6.8.	The general principles of integrated pest management are to be applied for the protection of agricultural crops.	BFSA Farmers	ongoing	Number of infringements found concerning the application of the general principles of integrated pest management.	High	
6.9.	For the protection of agricultural crops the specific principles of integrated pest management may also be applied, in line with which the integrated production of plants and plant products is carried out.	BFSA Farmers	ongoing	Number of farmers voluntarily applying specific IPM principles (area covered, as a % of total cultivated area).	High	
6.10.	In protecting agricultural crops from economically significant pests by means of integrated pest management, following the assessment and recommendation of an integrated production advisor, a farmer may apply a plant protection product in a dose that is lower than that authorised, provided that the efficacy of the product in that dose has been proven and that there is no risk of resistance developing, to reduce the risks and impact of pesticide use on human health and the environment, and to maintain pest populations below the EDT.	integrated production advisor	when there is a justified opportunity		Medium	
6.11.	Areas for organic farming – size of utilised agricultural land farmed organically. Promotion of organic farming by means of information campaigns	MAFF NGO	Update of the National Plan for the Development of Organic Farming in Bulgaria	1. Number of registered organic farmers (as a % of the total number of registered farmers). 2. Area used for organic farming as a % of the total area cultivated. 3. Volume of organic production 4. Number of information campaigns to promote organic farming	Medium	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
6.12.	Establishment of priority items such as active substances, crops, regions or practices that require special attention, or good practices in terms of reducing the risks and impact of pesticide use on human health and the environment.	Agricultural pharmacies	ongoing	1. Number of priority sites and areas established 2. Identification of the active substance and crop combination based on long-term observations	High	
6.13.	Identification of active substances of particular concern, persistent or high-risk active substances (toxic, highly toxic, bio-accumulative, carcinogenic, mutagenic, reproductively toxic, endocrine disruptors) for which there are safer alternatives and substituting them by alternatives (list of active substances that are candidates for substitution, in line with Article 24 of Regulation 1107/2011).	RACFC BFSA	as per Regulation No 540/2011 Regulation 408/2015	Number of comparative assessments of PPPs from the total number of authorised PPPs containing candidates for substitution Number of authorisations refused for PPPs containing active substances that are candidates for substitution, as a percentage of the number of authorisation requests. Number of requests for the renewal of authorisation refused, for PPPs containing active substances that are candidates for substitution, as a percentage of the requests.	Medium	
6.14.	Creating and maintaining an internet portal on plant protection	ARIB Specialist agricultural websites (www.nivabg.com) and others	ongoing	1. Infestation above the EDT of economically significant pests – areas, crops. 2. Declared calamity or epiphytotic outbreak – areas, crops.	High	
6.15.	Introduction and use of advisory systems and mathematical models to forecast the development of key pests for agricultural	Agricultural pharmacies	ongoing	Number of advisory systems and mathematical	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
	crops that are of strategic significance for the country.	Universities Advisors		forecasting models used		
7. Reduction of pesticide residue levels in food of plant origin produced in Bulgaria						
7.1.	Control of pesticide residues in plants and plant products intended for use as food – by taking and analysing field and greenhouse samples, by crop type.	BFSA CLCTC	ongoing	<p>1. Number of samples taken and analysed for pesticide residues in food of plant origin.</p> <p>2. Number of crops from which samples were taken for testing for pesticide residues in food of plant origin.</p> <p>3. Number of samples analysed with pesticide residues below the MRL detected in food of plant origin.</p> <p>4. Number of samples analysed with pesticide residues above the MRL detected in food of plant origin.</p> <p>5. Number of samples analysed with one or more prohibited active substances detected.</p> <p>6. Number of RASFF notifications concerning cases where the MRL was exceeded, leading to the withdrawal of food of plant origin from the market (as a</p>	High	<p>1. Reduction of pesticide residues in food of plant origin (produced in Bulgaria), contributing significantly to the preventive protection of consumers.</p> <p>2. Increased consumer interest and demand for Bulgarian plant products.</p> <p>3. Increased consumer trust – safe products.</p>

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				% of all communications/warnings). 7. Number of samples with more than one pesticide residue detected.		
7.2.	Strengthening controls on the use of plant protection products – by taking and analysing plant samples from fields or greenhouses, to identify the PPPs used.	BFSA CLCTC	ongoing	1. Number of active substances analysed. 2. Number of samples analysed to identify the PPPs used. 3. Number of crops tested to identify the PPPs used. 4. Number of samples analysed with one or more prohibited active substances detected. 5. Number of samples analysed for which unauthorised use of PPPs was detected.	High	
7.3.	Carrying out a risk assessment of food of plant origin with pesticide residues detected above the MRL.	RACFC	ongoing	Number of risk assessments carried out of food in which the pesticide residue MRL was exceeded.	High	
7.4.	Publication on the BFSA website of information relating to pesticide pollution of food of plant origin.	RACFC	ongoing	Number of information materials relating to pesticide pollution of food of plant origin.	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
8. Specific measures to protect the aquatic environment and drinking water						
8.1.	Monitoring drinking water quality.	Water and sanitation operators (full scope) MH, Regional Health Inspectorates (up to 50% of full scope);	ongoing	1. Number of samples taken and analysed for pesticide residues in drinking water and bottled water: 2. Number of samples analysed of drinking and bottled water with pesticides above the MRL detected.	High	1. Implementation of measures to reduce the risks of pesticide residues in drinking and bottled water will decrease the pesticide risk and its impact on human health. 2. The prevention and/or reduction of water pollution by pesticides will reduce the risks and impact of pesticide use on human health and the environment.
8.2	Monitoring surface water and groundwater used for drinking and household use.	MEW EEA Water and sanitation operators	ongoing	1. Total number of samples tested for pesticide residues from surface water used for drinking and household use. 2. Number of samples analysed with pesticide residues below the MRL detected in surface water for drinking and household use. 3. Number of samples analysed with pesticide residues above the MRL detected in surface water for drinking and household use. 4. Total number of samples tested for pesticide residues from groundwater for drinking and household use. 5. Number of samples analysed with pesticide residues below the MRL detected in groundwater for		3. The prevention and/or reduction of the risks posed by pesticide residues in water sources will reduce the risks and impact of pesticide use on human health and the environment. 4. Protection of water and of water protection zones.

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				drinking and household use. 6. Number of samples analysed with pesticide residues above the MRL detected in groundwater for drinking and household use.		
8.3.	Improving the collection and the exchange of information on the types and quantities of pesticides used on the territory of surface water protection zones and groundwater protection zones or parts thereof which appear on the surface, especially those formed in karstic and fissure aquifers.	BFSA MH MEW	ongoing			
8.4.	Publishing on the websites of the Ministry of the Environment and Water and the Basin Directorates of information on the designated safeguard zones for drinking water sources in the form of zone registers. It should be borne in mind that the safeguard zones are not equivalent to the water protection zones under Article 119a(1) and (2) of the Water Act.	MEW	ongoing		High	
8.5	Improving controls on compliance with the requirements for the prohibition and restriction of pesticide use in safeguard zones.	legal entities operating water sources	ongoing		High	
8.6.	Giving preference to plant protection products, in accordance with the ecotoxicological assessment carried out when authorising the product and the Authorisation for Placing on the Market and Use of PPPs (CLP classification), which are not classified as hazardous to the aquatic environment, in line with Regulation (EC) No 1272/2008, and which do not contain priority hazardous substances as defined in the Water Act. Information on the CLP classification can be found on the product's label.	BFSA plant protection industry, farmers associations, others	ongoing	Number of plant protection products not classified as hazardous to the aquatic environment.	High	
8.7.	Giving preference to the most effective methods of application,	MAFF, Centre for	ongoing	Number of inspections	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
	such as the use of equipment for the application of plant protection products, in line with Regulation No 5 of 3 February 2016 on the periodic inspections of the equipment for the application of plant protection (published in SG No 11 of 9.2.2016), such as the use of application equipment with reduced spray drift, especially for hop gardens, fruit orchards and vineyards.	Testing and Certification (TsIS) Ruse and Plovdiv associations of agricultural equipment traders, farmers associations, others				
8.8	Minimising the risk of off-site pollution caused by spray drift, drain-flow and run-off, including the establishment of untreated buffer zones of a suitable size to protect non-target aquatic organisms: buffer zones are to be set on an individual basis for each plant protection product during the assessment and authorisation procedure and are to be stated on the product label.	BFSA RACFC Farmers, farmers associations, others	ongoing	Number of infringements or non-compliances found	High	
8.9.	Reducing or eliminating the application of plant protection products on or along highways, railway lines, highly permeable surfaces or other infrastructure close to surface water or groundwater, or on sealed surfaces with a high risk of run-off into surface water or sewage systems.	BFSA National Railway Infrastructure Company	ongoing	Number of applications of plant protection products on the sites in question.	Medium	
8.10.	Farmers and farmers associations must comply with the prohibitions and restrictions on plant protection product use in protection zones for water intended for drinking and household use and mineral water, and in safeguard zones for surface water and groundwater intended for drinking and household use.	Farmers farmers associations and others	ongoing	Number of infringements or non-compliances found	Medium	
8.11.	Prohibition of the use of professional-category plant protection products in protection zones designated in the Water Act, or other areas designated by order of the Minister for the Environment and Water. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.	BFSA	ongoing	Number of infringements found concerning the use of professional-category plant protection products in protection zones designated in the Water Act, or other areas designated by order of the Minister for the	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				Environment and Water.		
8.12.	Ensuring integrated water management in the public interest and to protect public health, along with the conditions needed to reduce the release of priority substances and priority hazardous substances, in line with the Water Act.	MEW	ongoing	Updated RBMP	High	
8.13.	Monitoring surface water, in line with the Order of the Minister for the Environment and Water on water monitoring.	EEA	ongoing	<p>1. Total number of surface water samples tested for pesticide residues.</p> <p>2. Number of samples analysed with pesticide residues below the MRL detected in surface waters, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.</p> <p>3. Number of samples analysed with pesticide residues above the MRL detected in surface waters, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.</p>	High	
8.14.	Monitoring groundwater, in line with the Order on Water Monitoring of the Minister for the Environment and Water, taking into account the types of plant protection products used provided by the BFSA for this purpose.	EEA	ongoing	<p>1. Total number of groundwater samples tested for pesticide residues.</p> <p>2. Number of samples analysed with pesticide residues below the MRL detected in groundwater, pursuant to the Water Monitoring Order of the</p>	High	

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				Minister for the Environment and Water. 3. Number of samples analysed with pesticide residues above the MRL detected in groundwater, pursuant to the Water Monitoring Order of the Minister for the Environment and Water.		
8.15.	Development and maintenance of an information system on plant protection products, their production/import, contents, quantity, place of application, type and quantities imported.	MAFF BFSA	Time limit: 5 years	Quantity of imported PPP Quantity of produced PPP Quantity of used PPP	Medium	Provision of information to the BD
8.16.	Development and maintenance of an information system on spatial organisation, maintenance and provision of information on agricultural pressure (GIS-based information).	MAFF BFSA	Time limit: 5 years		Medium	Provision of information to BD
9. ADDITIONAL ENVIRONMENTAL PROTECTION MEASURES						
9.1.	Monitoring persistent organochlorine pesticides in soil, in line with soil monitoring schemes pursuant to the Order of the Minister for the Environment and Water.	MEW EEA	ongoing	1. Number of soil samples taken and analysed with an organochlorine residue level below the MRL detected, which are subject to monitoring by the EEA. 2. Number of soil samples taken and analysed with a persistent organochlorine residue level above the MRL detected, which are subject to monitoring by the EEA.	High	1. Available information, analysis and assessment of the persistent organochlorine pesticide levels in soil, included in the Annual Report on the Status of the Environment. 2. Protection of the environment, in particular soil and water.
9.2.	Organisation of monitoring to determine pesticide residues in	EEA	ongoing	1. Number of soil samples	Medium	Available information on

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
	soil in the areas of undertaking producing such substances.	RIOSV		<p>taken and analysed for residues of pesticides produced by the undertaking.</p> <p>2. Number of soil samples taken and analysed with a residue level below the MRL detected of pesticides which are subject to annual monitoring.</p> <p>2. Number of soil samples taken and analysed with a residue level above the MRL detected of pesticides which are subject to annual monitoring.</p>		<p>the presence of pesticides in soil.</p> <p>Protection of the environment, in particular soil and water.</p>
9.3.	Provision to MEW/DB of the results from the monitoring of pesticides in soils, in connection with the planning of surveillance monitoring of waters for the pesticides concerned, in the areas where soil pollution has been detected.	EEA RIOSV	ongoing		Medium	The prevention of and/or reduction in pesticide soil pollution reduces the risks and impact of pesticide use on human health and the environment.
11. INFORMATION AND AWARENESS RAISING CONCERNING THE IMPACT OF PESTICIDE USE ON HUMAN HEALTH AND THE ENVIRONMENT						
11.1.	Provision to the general public via the website of the Risk Assessment Centre for the Food Chain (RACFC) and of the Ministry of Health of information on plant protection products, the risks posed by their use and the possible acute and chronic consequences for human health, non-target organisms and the environment, and on the use of non-chemical alternatives.	RACFC, MH	ongoing	<p>Number of cases of acute and chronic pesticide poisoning of professional users, operators and agricultural workers.</p> <p>Number of informational items published on the risks posed by the use of pesticides and the possible acute and chronic consequences for human health, non-target organisms</p>	High	1. Greater awareness among the general public, institutions, professional and non-professional users of pesticides, operators and agricultural workers, distributors of plant protection products and advisors of the impact of plant protection products on human health and the environment.

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
11.2.	Annual reporting to the BFSA of all available information relating to the lack of expected efficacy, the development of resistance and to any unexpected effect on plants, plant products and the environment, and information from observations of the impact of a product on professional users.	holders of an authorisation to place on the market and use plant protection products	ongoing	Number of reported cases of lack of expected efficacy, development of resistance and of any unexpected effect on plants, plant products or the environment, and information from observations of a product's impact on professional users.	High	<p>and the environment..</p> <p>2. Reduction of the risks and impact of pesticide use on human health, through greater awareness on the part of the individuals listed above.</p> <p>3. More information available to institutions and users on the requirements for the sale and use of plant protection products.</p> <p>4. Greater awareness within institutions and among distributors and agricultural producers concerning the risk arising from the sale and use of unauthorised, illegal and counterfeit plant protection products.</p>
11.3.	Collection of information on cases of acute and chronic poisoning with plant production products.	MH via N.I. Pirogov Hospital	ongoing until the end of 2020	<p>Number of cases of acute and chronic pesticide poisoning of professional users, operators and agricultural workers.</p> <p>Survey of Member States' experience with the collection of information on cases of chronic pesticide poisoning.</p> <p>Analysis and assessment of how the information</p>	High	Available information on cases of acute poisoning with plant protection products, as well as cases of developing chronic poisoning.

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
			until the end of 2021	received applies to Bulgaria.		
12. Reduction of pesticide use or risks in specific areas						
12.1.	Prohibition of the use of professional-category plant protection products in areas used by the general public or vulnerable groups, as defined in Article 3 of Regulation (EC) No 1107/2009, such as public parks and gardens, sports and recreational areas, areas adjacent to schools and playgrounds, and areas located in the immediate vicinity of health care institutions. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.	BFSA Municipalities local authorities	ongoing	Number of infringements found involving use of professional-category PPPs on areas used by the general public, protected areas and other specific areas (pursuant to Article 12 of Directive 2009/128/EC).	High	Prevention of and/or reduction of the risks of pesticides use in public spaces and recreational areas, thereby ensuring the protection of the general public and vulnerable population groups.
12.2.	Prohibition of the use of professional-category plant protection products in protection zones designated in the Water Act , or other areas designated by order of the Minister for the Environment and Water. If such areas need to be treated, plant protection products of the non-professional use category, low-risk plant protection products or biological agents are to be used.	BFSA	ongoing	Number of infringements found involving use of professional-category plant protection products in protection zones designated in the Water Act, or other areas designated by order of the Minister for the Environment and Water.	High	The prevention of and/or reduction in water and soil pollution by pesticides reduces the risks and impact of pesticide use on human health and the environment.
12.3.	Prohibition of the use of pesticides in specific districts, including certain protected territories, such as pastures and meadows in some zones in the Natura 2000 network.	MEW EEA	ongoing	1. Number of infringements involving use of PPPs in protected areas and zones of the Natura 2000 ecological network for which a prohibition of pesticide use has been introduced. 2. Number of proven cases of pesticide poisoning of animals, birds and other	High	Prevention and/or reduction of the impact of pesticides on biodiversity and natural habitats, including soil biodiversity, non-target organisms, bees, etc.

No	Measure/Action	Responsible Institutions	Implementation deadline	Progress indicators	Priority	Expected results
				non-target organisms. 3. Areas, protected areas and Natura 2000 sites		
12.4.	All planned activities pursuant to the National Action Plan for Sustainable Pesticide Use that are to be implemented in protected areas must be consistent with the protection rules and restrictions introduced by the Protected Territories Act (ZZT), the designation orders and the management plans.	MEW	ongoing	Number of investment proposals/activities consistent with [the rules]laid down in the Protected Territories Act, the designation orders and the management plans.	Medium	
12.5.	Compliance with legislative requirements for the protection of bees and bee colonies from pesticide poisoning.	MAFF, Livestock Farming Directorate, BFAA accredited laboratories for analysis of pesticide residues in bees and plant materials	ongoing	Number of proven cases of pesticide poisoning of bees.	High	
12.6.	Implementation of additional measures to protect bees from pesticide poisoning.	MAFF, BFAA, farmers associations, plant protection industry beekeepers associations	ongoing	Number of declarations submitted under Article 110(2)(4) ZZR during the authorisation procedure for aerial spraying	High	

X. GLOSSARY

Active substances – substances or micro-organisms, including viruses, which have a general or specific effect against pests or on plants, parts of plants or plant products.

Active substance that is a candidate for substitution – an active substance which meets one or more of the supplementary criteria set out in point 4 of Annex II to Regulation (EC) No 1107/2009.

Biological agent – a biological entity capable of self-reproduction which is used to combat harmful organisms.

Pest – any plant or animal species, genus or biotype, or pathogenic agent that is harmful to plants and/or plant products.

Temporary warehouse – a warehouse for the storage of plant protection products, used by farmers only during the vegetation period of agricultural crops.

Aerial spraying – application of plant protection products from an aircraft (aeroplane or helicopter).

Contracting entity for aerial spraying – a person who assigns/commissions the application of plant protection products from an aircraft with the aim of protecting plants from pests, and who must submit a written application to the relevant municipalities, regional food safety directorates and regional forestry authorities before commencing treatment.

Distributor – any natural or legal person other than the person who places a product on the market, who makes a plant protection product available on the market, including wholesalers, retailers, vendors and suppliers.

Good plant protection practice – a practice whereby the treatments with plant protection products applied to given plants or plant products, in conformity with the conditions of their authorised uses, are selected, dosed and timed to ensure acceptable efficacy with the minimum quantity necessary, taking due account of local conditions and of the possibilities for cultural and organic control.

Good agricultural crop health – a state in which pests are determined to be below the economic damage threshold.

Member States – member states of the European Union.

Epiphytotic outbreak – large-scale manifestation of a disease linked to significant plant losses, over a certain period of time, within a specific district, region or the whole country.

Pollutant – a substance contained in plant raw materials as a result of the activities involved in their cultivation and storage or in soil or water as a result of environmental pollution.

Agricultural producer – a natural or legal person who produces plants and plant products within the country that are intended for sale.

Aerial sprayer/Aviation operator – a person with proven ability to carry out specialised aviation works under the terms of Regulation 24 of 2000, certified an aviation operator for specialised aviation works by the Civil Aviation Administration Central Directorate.

Economically significant pests – diseases, adversaries and weeds which appear on an annual basis, cause significant losses to agricultural production and have an impact on the safety and quality of plants and plant products.

Plant protection inspectors – experts with an education in agronomy who are appointed at regional food safety directorates and possess the necessary qualifications to carry out official controls of plant protection products, fertilisers, soil improvement agents, biologically active substances and food substrates and activities involving them.

Integrated production – a system for producing plants and plant products through the application of specific principles of integrated pest management.

Integrated pest management – careful consideration of all available plant protection methods and subsequent integration of appropriate measures that discourage the development of populations of harmful organisms and keep the use of plant protection products and other forms of intervention to levels that are economically and ecologically justified and reduce or minimise risks to human health and the environment. Integrated pest management emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.

Calamity – large-scale manifestation of a pest linked to significant losses of plants, over a certain period of time, within a specific district, region or the whole country.

Quarantine pest – a pest that is of potential significance for the economy of the threatened zone, and which is not as yet represented in that zone, or is already in it but is not widespread and is an object of official control.

Quarantine period – the minimum admissible time interval (in days) between the last application of plant protection products and the harvesting of the crop (including pastures) which allows for the earliest possible safe use of the treated product by consumers, including farm animals.

Use category – allocation of a plant protection product to a certain group with the aim of restricting its use to a certain category of user.

Advisor – any person who has acquired the necessary knowledge and advises on pest management and the safe use of pesticides, in the context of a professional capacity or commercial service, including private self-employed and public advisory services, commercial agents, food producers and retailers where applicable.

Maximum residue level for pesticides (MRL) means the upper legal level of a concentration for a pesticide residue in or on food or feed set in accordance with Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin.

Unauthorised use – application of an authorised plant protection product outside the uses listed in the authorisation for the product to be placed on the market and used.

Non-chemical methods – alternative methods to chemical pesticides for plant protection and pest management, based on agronomic techniques or physical, mechanical or biological pest control methods.

Repackaging facilities – specialised dedicated facilities in which, under set conditions, the content of plant protection products is transferred from one package to another, usually smaller package, for trading purposes.

Plant protection product application equipment – any apparatus specifically intended for the application of pesticides, including accessories that are essential for the effective operation of such equipment, such as nozzles, manometers, filters, strainers and cleaning devices for tanks.

Environment – water (including surface water and groundwater), air, soil, wild species of fauna and flora and any interrelationship between them, and their relationship with other living organisms.

Original packaging – the packaging of the producer of plant protection products, with a label and batch number, which is presented and authorised in the process of authorisation for type, capacity and material specification.

Pesticide residues – one or more substances present in or on plants or plant products, edible products, drinking water or elsewhere in the environment and resulting from the use of a plant protection product, including their metabolites, breakdown or reaction products.

Pesticide – a plant protection product.

Behaviour of a plant protection product in the environment – the impact of products on components of the environment and the possibility of their getting into the soil, polluting groundwater and surface water, and being dispersed in the atmosphere as a result of their use.

Risk indicator – the result of a method of calculation that is used to evaluate risks of pesticides on human health and/or the environment.

Economic damage threshold – the population level of a certain type of adversary, disease causative factor or weed on average per unit of area at which the harm caused by it, expressed as a value, is more than double the cost of chemical control.

Repackaging of plant protection products – production process in which the content of a plant protection product is transferred from one package to another, usually smaller, package.

Plant protection products – products in the form in which they are supplied to the user, consisting of or containing active substances, safeners or synergists and intended for one of the following uses:

a) protecting plants or plant products against all harmful organisms or preventing the action of such organisms, unless the main purpose of these products is considered to be for reasons of hygiene rather than for the protection of plants or plant products;

b) influencing the life processes of plants, such as substances influencing their growth, other than as a nutrient;

c) preserving plant products, in so far as such substances or products are not subject to special Community provisions on preservatives;

d) destroying undesired plants or parts of plants, except algae unless the products are applied on soil or water to protect plants;

e) checking or preventing undesired growth of plants, except algae unless the products are applied on soil or water to protect plants.

Professional user – any person who uses plant protection products in the course of their professional activities, including operators, technicians, employers and self-employed people, both in the farming and in other sectors.

Authorised plant protection product – any plant protection product for which a valid authorisation for marketing and use has been issued by the Executive Director of the Bulgarian

Food Safety Agency.

Authorised use – application of a plant protection product for a given crop, against a specific pest, at a dose and subject to conditions of application as specified in the authorisation for marketing and use issued by the Executive Director of the Bulgarian Food Safety Agency. All authorised uses are to be listed on the product label.

Authorisation of a plant protection product – an administrative act by which the competent authority of a Member State authorises the placing on the market of a plant protection product in its territory.

Plants – live plants and live parts of plants, including seeds, live parts of plants being: fruit in the botanical sense without deep-frozen preserved tubers, bulbs, roots, cut flowers, branches and leaves; felled trees, parts of them and leaves; tissue cultures.

Plant products – products of plant origin (including grain) unprocessed or having undergone simple preparation, in so far as these are no longer plants.

Agricultural pharmacy – a public facility for trade in plant protection products of professional 2 or non-professional use category, in packaging with a capacity of up to 1 litre/kilogram, including sales to end users.

Warehouse – a facility for wholesale trade and/or storage of plant protection products, including a warehouse for storage of plant protection products by agricultural producers.

Specialised plant protection activities – fumigation against pests of plants, plant products and other objects; treatment of seeds intended for sale; advisory services for integrated pest management.

Trade in plant protection products – any actions comprising purchase/sale, acquisition, import or export, delivery, storage or supply of plant protection products.

Counterfeit or illegal plant protection products – products which are not authorised for sale and use in Bulgaria as plant protection products, or which mimic authorised plant protection products.

Plant protection product formulation – the form in which a plant protection product is placed on the market.

Fumigation – a method of destroying pests that is based on the use of gases in enclosed spaces.

Sensitive crops – crops which react, to varying degrees, on contact with a plant protection product, whereupon the plants may die or undergo irreversible physiological changes.

XI. EXECUTIVE SUMMARY

The National Action Plan for Sustainable Pesticide Use was drawn up and adopted in accordance with Article 4 of Directive 2009/128/EC on the sustainable use of pesticides and the Plant Protection Act.

The Action Plan lists the main legal requirements in the sphere of plant protection, and specifically as regards plant protection products – their sale, proper use and so on – with the aim of protecting human health and the environment.

The National Action Plan sets two main objectives: reducing the risks and impact of pesticides on human health and the environment, and promoting integrated pest management and alternative approaches and methods for plant protection. It sets out specific measures and actions to achieve these objectives, along with a schedule for their implementation and indicators to measure progress.

The present National Action Plan has been reviewed and updated in line with changes made to the applicable legislation and in order to introduce measurable quantitative indicators clearly outlining progress towards meeting the objectives set and reducing the risk to humans and the environment.

Following its approval by the Council of Ministers, the National Action Plan will be submitted to the European Commission in accordance with Article 124(4) ZZR and Article 4 (2) of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009.

Timely implementation of the measures and actions set out in the National Plan and achievement of the objectives will ensure a high level of protection of human health and the environment from pesticides.