NATIONAL ACTION PLAN

FOR THE

SUSTAINABLE USE OF

PLANT PROTECTION PRODUCTS

– ESTABLISHMENT AND IMPLEMENTATION –

(VOLUME I)

MINISTÉRIO DA AGRICULTURA, DO MAR, DO AMBIENTE E DO ORDENAMENTO DO TERRITÓRIO

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NATIONAL ACTION PLAN FOR THE SUSTAINABLE USE OF PLANT PROTECTION PRODUCTS

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EXECUTIVE SUMMARY

In its Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 'The CAP towards 2020'[1], the European Commission identifies three core challenges the Common Agricultural Policy must face: food security, the environment and climate change, and territorial balance. The Commission proposes a common response to these three objectives: viable food production, sustainable management of natural resources, climate change mitigation and adaptation and balanced territorial development.

The adoption and implementation 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, which translates the European Commission's major challenges into specific implementing measures to be ensured by Member States, represents a major contribution to this response in terms of the use of plant protection products.

In the context of Community legislation on these products, notwithstanding other equally important legislation concerning their placing on the market[2] and the collection of statistical data[3], Directive 2009/128/EC is innovative, since it applies to the use of plant protection products for the first time and seeks to safeguard human health and the environment against potential risks associated with their use.

Law No 26/2013, which regulates the distribution, sale and application of plant protection products for professional use and their adjuvants and defines procedures for monitoring the use of such products, was published to put the application of Directive 2009/128/EC into operation. This Law, together with Decree Law No 86/2010 of 15 June 2010, which establishes the mandatory inspection scheme for application equipment for plant protection products authorised for professional use, transposes the above-mentioned Community Directive into national law. Article 51 of this Law provides for **National Action Plans** [NAP] to be drawn up with a view to reducing the risks and effects of the use of plant protection products on human health and the environment and promoting the development of integrated pest management [IPM] and alternative approaches or techniques which reduce dependency on the use of such products.

In Portugal the preparation of the National Action Plan for the sustainable use of plant protection products was authorised by the Minister for Agriculture, the Sea, the Environment and Regional Panning through *Despacho* [Order] No 13879/2012 of 25 October 2012. This Order created a Workgroup of representatives of direct and indirect State administration departments, private organisations, agriculture and the plant protection industry and recognised plant protection specialists. The list of organisations represented on this Workgroup can be found in Annex IV.

In compliance with EU guidelines, this NAP was drawn up in cooperation with various public and private sector representatives, without whom it would not have been possible to

[1] COM(2010) 672 final of 18.11.2010.

[2] 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.

[3] Regulation (EC) No 1185/2009 of the European Parliament and of the Council of 25 November 2009 concerning statistics on pesticides.

achieve the intended objectives. It should also be noted that this Plan can only be effectively implemented with the commitment and cooperation of all the parties involved in the production, storage, sale and use of plant protection products and the parties responsible for managing the effects and risks associated with their use.

This document is divided into two volumes (I and II). This volume (Volume I) focuses on the development and implementation of the NAP in the light of the objectives of Directive 2009/128/EC, embodied in Law No 26/2013 of 11 April 2013. Volume II describes the current situation in terms of the sale and use of plant protection products and presents the legislative framework in various areas relevant to their sustainable use.

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1. Introduction

This document, the first of two volumes, presents the operational component of the proposed National Action Plan. It includes a comprehensive description of the current situation regarding the sale and use of plant protection products and maps out the various facets of the legal framework, i.e. protection of human health and the environment and sustainable means of protection and production, which are detailed in Volume II.

For the purposes of the NAP and the strategy for the sustainable use of plant protection products, these products will be defined as pesticides used to protect plants or plant products from all harmful organisms (pests, diseases and weeds), to influence the life processes of plants and to preserve plant products, as defined by 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.

The proposed framework for the NAP mirrors the areas and objectives set out in Law No 26/2013, which regulates the distribution, sale and application of plant protection products for professional use and their adjuvants and defines procedures for monitoring the use of such products. This Law, together with Decree Law No 86/2010 of 15 June 2010 establishing the mandatory inspection scheme governing application equipment for plant protection products authorised for professional use, transposes Directive 2009/128/EC into national law. These objectives are pursued within the broader perspective of a national strategy for the sustainable use of plant protection products that does not undermine national agricultural competitiveness.

This NAP seeks to achieve high levels of human and environmental protection against potential risks associated with plant protection products while maintaining the economic viability of agricultural production and effective pest control.

The achievement of the objectives set out is dependent upon the involvement and shared responsibility of all partners in ensuring that the actions and measures to be developed are effectively implemented and monitored, and upon the involvement of all professional plant protection product users. It is assumed that professional users will observe certain minimum requirements, failing which the success of the action to be taken will be compromised.

The effective promotion of viable agriculture, the sustainable use of plant protection products and adequate human health and environmental protection requires investment, enhanced implementation of the existing legal system and the effective application of standards and guidelines produced by the competent bodies, i.e. the environmental authorities, the national plant health authority, regional and local agricultural and environmental departments and farm support structures existing or to be set up for this purpose. In summary, human health and environmental protection must focus in particular on the following structural aspects, which also underlie all the measures to be implemented in the framework of this NAP:

- strict compliance with current human health and environmental legislation on the sustainable use of plant protection products;

- encouragement of the adoption and implementation of good agricultural and environmental practice during and after the application of plant protection products, supplemented by appropriate monitoring, awareness-raising and training for

professional users to ensure compliance;

- promotion of research, innovation and technology transfer to encourage the incorporation of knowledge into plant protection and agricultural production practices and techniques;

- encouragement at central and regional administration level of responsible advice on the use of plant protection products which are less harmful to non-target organisms and promotion of the development and application of alternatives to such products;

- encouragement of the dissemination and accessibility of standards, guidelines and procedures to be implemented to ensure the correct use of plant protection products by the respective users;

- appropriate inspection, monitoring and surveillance of agricultural and plant protection practices, incorporating corrective and disciplinary measures for bad practice.

The NAP thus seeks to address the concerns and aims set out in the current legal framework by establishing a range of objectives and specific measures for putting that framework into operation, while implementation and monitoring on the ground must be ensured as defined and agreed with all the partners.

This Volume I presents the quantitative objectives, indicators, targets, measures and timetable of the actions planned with a view to reducing the risks and impact of the use of plant protection products on human health and the environment and promoting the development of integrated pest management and alternative approaches or techniques in order to reduce dependency on the use of such products.

2. Implementation of the National Action Plan for the Sustainable Use of Plant Protection Products

In general terms, Directive (EC) 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishes various lines of action to be adopted by Member States to ensure compliance with its objectives of promoting and enhancing human health and environmental protection and encouraging the use of alternative techniques and methods, including integrated pest management. This involves training and awareness-raising for users, responsible sale, the safe use of application equipment, aerial applications, reduction of the risks associated with the use of plant protection products, the handling and storage of such products and management of their residues. The cross-cutting nature of training and awareness-raising makes it a particularly important line of action, since it is essentially by promoting the acquisition of skills and expertise concerning the risks and effects of these products that practices associated with their safe use can be improved.

In addition to training, reference must also be made to the contribution of research and the application of scientific and technical knowledge in enhancing the means and instruments available to professional users, including complementary or alternative methods to the use of plant protection products. Two cross-cutting axes have been established in this respect which underlie all the activities to be developed under this Plan:

Cross-cutting axis 1 – Research, innovation and technology transfer;

Cross-cutting axis 2 – Training, awareness-raising and information.

The following three strategic axes have also been established in line with the major objectives of Law No 26/2013 to implement a policy to reduce the risks associated with the use of plant protection products:

Strategic axis 1 – Protection of human health;

Strategic axis 2 – Protection of the environment;

Strategic axis 3 – Promotion of sustainable agricultural and forestry production systems.

Having defined the axes on which this Plan is based, an organisational structure must be developed to ensure its implementation. The above-mentioned cross-cutting axes are considered first since they include objectives and specific measures which are common to the strategic axes. Due to the nature of the themes addressed within each axis, their organisation varies. The cross-cutting axes have been simplified and organised according to the objectives identified, while the strategic axes are developed according to themes or policy areas regarded as priorities, in which lines of action are identified which are fleshed out by quantifiable objectives, measures, targets and appropriate indicators. The measures included in this Plan are organised in the form of action records which are set out in Annex I to this document.

2.1. Cross-cutting axis 1 - Research, innovation and technology transfer

Research and knowledge transfer programmes and measures to determine the impact of the use of plant protection products on human health and the environment must be promoted to meet the need to encourage the development and introduction of integrated pest management and alternative approaches or techniques in order to reduce dependency on the use of such products. Professional users must also be given support in making decisions on the choice of methods to ensure compliance with the principles underlying integrated pest management.

The structure of this axis differs from that of the strategic axes due to its cross-cutting nature: a single objective has been identified and the relevant measures and indicators have been listed for that objective, as shown in the following table.

Table 2.1.1. Objective, indicators and measures in the context of research, innovation and technology transfer

Objective	**Indicators**	**Body responsible for indicator**	**Measures**
To promote research, innovation and technology transfer to encourage the development and practice of integrated pest management and sustainable production methods	% of major crops with technical guides defined/revised for IPM	DGAV/INIAV I.P.	**M1:** Gather technical-scientific information on the components of integrated pest management in the country's various crop systems, the impacts of plant protection product use on human health and the environment, standardisable indicators and other information on the use of plant protection products **M2:** Support the inclusion of knowledge in the technical guides for sustainable production methods and identify gaps in knowledge to guide future research **M3:** Foster operational networks proposing thematic research and innovation priorities **M4:** Foster operational networks proposing demonstration activities under integrated pest management and the sustainable use of plant protection products
	No of crops with technical guides for IPM		
	No of workgroups set up		
	No of platforms set up/accessible		
	No of accesses to IPM thematic platforms, health and environmental impact of PPP and indicators of sustainable use		
	No of technical and technical-scientific documents included on the thematic platforms		
	No of RTD projects initiated during validity of the NAP.		

All the action records and the action to be taken under each measure to achieve the objectives of this cross-cutting axis can be found in Annex I, which also lists the bodies responsible for coordinating and implementing the different actions.

2.2. Cross-cutting axis 2 – Training, awareness-raising and information

Cross-cutting axis 2 ensures compliance with Articles 24 and 48 of Law No 26/2013 by improving the existing training system, making the necessary information available to all plant protection product users and raising their awareness of the potential human health and environmental risks and effects of using such products. The aim is to empower professional and non-professional users to take responsible and informed decisions on the application of these products.

Three specific areas have been identified within this cross-cutting axis which combine to ensure that all persons who handle and apply plant protection products, including non-professional users, acquire professional skills. These areas are reflected in three lines of action: training, awareness-raising and information.

2.2.1. Training and occupational qualifications in the sustainable use of plant protection products

If professional plant protection product users are not provided with appropriate training in their various occupational contexts, it is not possible to ensure that environmental health and safety principles can be safeguarded and that the potential risks and effects of the use of plant protection products can be minimised. As stated in Volume II, a national training and occupational qualifications system already exists, but it must be constantly updated and adapted to the requirements and provisions of the legislation produced, transposing Directive 2009/128/EC. Table 2.2.1.1 sets out a range of measures to meet this objective. These measures seek to update existing courses and create new ways of acquiring skills via a system that makes it possible to ensure training quality, promote the continuity of the various forms of funding and identify training needs in good time, while ensuring the involvement of the interested parties.

Table 2.2.1.1. Objective, indicators and training and occupational qualifications measures concerning the sustainable use of plant protection products

Objective	**Indicators**	**Body responsible for indicator**	**Measures**
To qualify all professional users by 26 Nov. 2015	Content of mandatory training activities updated (Y/N)	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M6:** Define and set up a reserve of trainers and training quality assessment criteria **M7:** Promote the funding of the mandatory training activities provided for under Law No 26/2013 **M8:** Promote communication between private training organisations, farmers' organisations and the administration to identify training needs **M9:** Promote training for the control bodies provided for under Law No
	No of training activities/year		
	No of trainees qualified/year		
	No of certificates issued in different training activities/year		
	Implementation and assessment of knowledge tests defined (Y/N)		
	No of knowledge tests/year		
	No of professional users qualified by a knowledge test/year		
	Content of training activities for control bodies defined (Y/N)		
	No of aerial agricultural operators trained/year		
	No of trainers in the reserve during validity of the NAP		
	Funding proposal negotiated and delivered by higher authority		

	(Y/N)		26/2013 **M10:** Foster b-learning training provision
	No of organisations in the communications network		
	No of applications for training received on platform set up		
	No of training activities for control bodies/year		
	Content of b-learning training activities defined		
	No of b-learning training activities/year		

2.2.2. Awareness-raising for plant protection product users

The training to be delivered and undertaken in national territory can be supplemented by awareness-raising as an additional way of transferring knowledge and exchanging experience, facilitated by user proximity. Such activity must be carried out by the competent authority in cooperation with the DRAPs [Regional Agriculture and Fisheries Directorates] in the case of professional users, and by local authorities in the case of non-professional users. It is also necessary to ensure that when the general public purchase plant protection products for non-professional use they are informed of their right to receive information on the risks and safety issues involved in handling and applying such products, which can be obtained in sales outlets not necessarily intended for marketing products for professional use. Table 2.2.2.1 shows the objectives, indicators and measures established under this line of action.

Table 2.2.2.1. Objective, indicators and measures in the context of awareness-raising for users of plant protection products

Objective	**Indicators**	**Body responsible for indicator**	**Measures**
To increase plant protection product users' understanding of the risks and effects of using such products	No of protocols entered into with local authorities	DGAV	**M11:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by non-professional users
	No of establishments contacted		
	No of awareness-raising activities for non-professional users	DGAV	**M12:** Carry out and promote awareness-raising activities for professional users to ensure compliance with appropriate risk reduction measures in applying plant protection products and adopting integrated pest management principles
	No of awareness-raising activities for professional users		

2.2.3. Information for all categories of plant protection product users

To supplement and support training and awareness-raising, it is essential to produce, update and disseminate information for professional and non-professional users. This information covers the various fields associated with the sustainable use of plant protection products, particularly information that helps professional users to adopt general integrated pest management principles. It can be provided in a variety of ways, from institutional websites to initiatives geared towards trainers and the dissemination activities provided for under Law No 26/2013 of 11 April 2013 and this National Action Plan. It is also important to conduct surveys at different levels which allow the competent authority to monitor agricultural

practices and their development, thus assessing the impact of activities carried out within this axis and users' ability to comply with the new legislation. Table 2.2.3.1 shows the objectives, indicators and measures established under this line of action.

Table 2.2.3.1. Objective, indicators and measures in the context of information to all categories of plant protection product users

Objective	**Indicators**	**Body responsible for indicator**	**Measures**
To inform all users of plant protection products of the issues involved in the sustainable use and adoption of general integrated pest management principles	Code of conduct on PPP distribution and sales channels updated (Y/N)	DGAV	**M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M14:** Collect information on the use of plant protection products
	Code of conduct on the application of PPP published and disseminated (Y/N)		
	% of satisfied users of the plant protection product website (survey)		
	No of themes with FAQ disseminated		
	No of workshops for trainers		
	No of actions to disseminate legislation		
	No of active communication platforms		
	No of actions connected to private organisation projects		
	No of alert notices issued		
	No of technical documents drawn up		
	Technical manual for preparing aerial application plans drawn up and disseminated (Y/N)		
	No of crops with IPM technical documents updated/year		
	No of crops with IP and OP technical guides updated		
	No of surveys answered in sales outlets		
	No of surveys answered in training activities		
	No of surveys answered on agricultural holdings		

All the action records and the action to be taken under each measure to achieve the objectives of this cross-cutting axis can be found in Annex I, which also lists the bodies responsible for coordinating and implementing the different actions.

2.3. Strategic axis 1: Protection of human health

Due to the inherently dangerous nature of plant protection products, their use involves risks for human, animal and environmental health. In relation to human health the risk arises:

a) At the level of the professional user, either as the operator or as a professional involved in the storage, distribution, sale or handling of plant protection products, due to risks arising from constant handling and exposure as a result of their professional activity.

b) At the level of agricultural workers and bystanders who may be exposed to the treatment, e.g. through spray drift, contact with pesticide residues on crops or in previously treated places or through accidents during the handling of plant protection products by people without proper training or by children.

c) At consumer level through the possibility of consumption of agricultural products containing pesticide residues due to the treatment of crops and/or stored agricultural products. Since agricultural products are tradable goods, a minimum quality standard must be met which guarantees their safety and freedom of movement in the EU market. This 'standard' takes the form of Maximum Residue Levels (MRLs) established on a harmonised basis throughout the EU, compliance with such levels being a major Europe-wide priority.

The protection of human health in connection with the use of plant protection products is reflected in a variety of components identified as **policy areas**. The following **lines of action** and quantitative objectives have been identified in this context:

- **protection of consumers** of the agricultural products treated, guaranteeing that professional users comply with authorised agricultural practices and promoting the use of alternative means of protection;

- **protection of professional users** by ensuring their vocational training and minimising their exposure during the handling and application of plant protection products;

- **protection of non-professional users** by raising their awareness of the possible risks of using plant protection products in a domestic environment or in small family vegetable gardens;

- **protection of third parties, including vulnerable groups** that may be exposed to the application of plant protection products, by means of the reporting obligation and by regulating applications in specific areas frequented by particularly vulnerable people.

These measures seek to categorise the different ways in which people come into contact with plant protection products so that specific lines of action can be defined for each type of exposure.

Consumers of agricultural products must be protected as far as possible against exposure to plant protection products and their residues in food consumed. Professional users, whether operators or people who handle plant protection products during their distribution and sale, are an occupational health risk group that should be protected by special measures. Non-professional users, particularly operators who come into contact with and apply plant

protection products in the context of recreational activities and/or the production of agricultural products for their own consumption, must also be specifically protected, regardless of whether they are only allowed access to a limited range of plant protection products. Finally, the protection of third parties must also be ensured – people who have nothing to do with the treatments applied but who may be directly or indirectly affected by them. The existence of specific vulnerable groups must be taken into account in this group.

2.3.1. Protection of consumers

Since food safety for consumers of food treated with plant protection products is a fundamental matter, a policy to reduce the risks of using such products must include an effective system for monitoring their responsible sale and use, whether with respect to MRL infringements or with respect to marketing conditions.

The following lines of action have been selected for this policy area:

- reduction in levels and risks of the use of plant protection products in food;
- reinforcement of good practice in the sale and application of plant protection products.

The protection of consumers of agricultural products must be ensured through strict compliance with authorised conditions of use so that levels and risks of exposure in food are acceptable. This is achieved by enhancing training and expertise in application techniques and ensuring that operators use plant protection products correctly.

2.3.1.1. Reduction in levels and risks of the use of plant protection products in food

This line of action involves ensuring that plant protection products are applied in accordance with their authorised conditions of use in such a way as to guarantee that risks to consumers are reduced, with decision-making being informed by specific training.

All professional operators must therefore be certified to ensure that they have the necessary range of skills to perform the job correctly. The number of dietary incidents must also be reduced and the degree of confidence in the existing system for monitoring residues in plant protection products and foodstuffs must be raised. Table 2.3.1.1.1 shows the relevant objectives, targets, indicators and measures within this line of action.

In this respect the definition of pesticide for control purposes is considered to be equivalent to the definition of residue set out in Regulation (EC) No 1107/2009. Testing for pesticides therefore includes testing for controllable active substances and the respective metabolites and breakdown or reaction products resulting from the use of plant protection products.

Table 2.3.1.1.1. Objectives, targets, indicators and measures in the context of reducing levels and risks of the use of plant protection products in food

Objective	Indicator	Target	Body responsible for indicator	Measures
To tighten control of pesticide residues in food	No of pesticides tested	5% annual increase compared to 2013	DGAV	**M15:** Monitor and control food of plant and animal origin
	Total number of samples analysed	5% annual increase compared to 2011-2013 average		
	Total number of different foods analysed	5% annual increase compared to 2013		
To reduce the number of dietary incidents	No of non-compliances with MRLs with risks for consumers	0 (zero)	DGAV	**M15:** Monitor and control food of plant and animal origin **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision

2.3.1.2. Reinforcement of good practice in the sale and application of plant protection products

This line of action seeks to regulate consumer protection by defining objectives which ensure that products are used in accordance with approved conditions of application (Table 2.3.1.2.1). The correct application of plant protection products can be encouraged by training operators, providing adequate advice at the time of sale and monitoring and controlling their application by professional users. The latter measure aims to encompass their application on agricultural or forestry holdings by land and aerial application companies by means of mandatory records on the holding.

At the time of sale to professional users, adequate information on the use of plant protection products and instructions on human health and safety risks must be provided to allow such risks to be managed.

Table 2.3.1.2.1. Objectives, targets, indicators and measures to reinforce good practice in the sale and application of plant protection products

Objective	Indicator	Target	Body responsible for indicator	Measures
To promote responsible sales	No of distribution and sales outlets inspected	5% annual increase compared to 2011-2013 average	ASAE	**M16:** Detailed timely dissemination of authorised uses **M17:** Monitoring and control of plant protection product distribution, sale and storage **M5:** Define and/or keep training standards on the sustainable use of plant
	% of prosecutions brought	5% annual decrease compared to 2011-2013 average		
	No of distribution and sales outlets monitored	5% annual increase compared to 2011-2013 average	DGAV	
	% of non-compliances	5% annual decrease compared to 2011-		

	recorded in monitoring distribution and sales outlets	2013 average		protection products up to date and promote training provision
To promote the correct application of plant protection products	No of non-compliances with MRLs	5% annual decrease compared to 2011-2013 average	DGAV	**M15:** Monitor and control food of plant and animal origin **M18:** Monitoring and control of the land-based application of plant protection products **M22:** Monitoring and control of the aerial application of plant protection products **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	No of holdings inspected within cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances with authorised conditions of use of PPP	5% annual decrease compared to 2011-2013 average	IFAP-DGAV	

2.3.2. Protection of professional users

The protection of professional users is primarily an occupational health and safety issue for professionals who handle, use and apply plant protection products. This group not only includes professional operators but also professionals involved in the storage, distribution and sale of plant protection products and any others who handle such products in after-sales and pre-application operations. The risks include not only acute poisoning due to ad hoc accidental contact, but also the chronic and subchronic risk of potential prolonged exposure due to normal professional activity.

The following lines of action have been selected for this policy area:

- protection of professional users in sales channels and storage;
- reduction of operator exposure;
- restrictions on the use of particular categories of plant protection products.

The aim is to promote and enhance users' skills to ensure that the personnel involved throughout the life-cycle of the product have the skills necessary to ensure their safety while performing their activity successfully, whether this involves handling, selling or applying products or providing advice. A particular objective is to promote the use of Personal Protective Equipment (PPE), not only at the simple level of 'use of the protective suit', but also the use of equipment prescribed as a minimum on each label to ensure the safe use of products. Greater emphasis must also be given to restricting the use of particular categories of plant protection products to groups of specially trained professional operators. This is because certain products, either due to the specific nature of the application technique or additional handling risks, require a degree of specialisation which should not be required of all professional operators.

2.3.2.1. Protection of professional users in sales channels and storage

The protection of professional users who operate in plant protection product sales channels and persons who purchase these products involves reinforcing handling and sales skills and providing advice to other professionals on their use, as well as ensuring that storage facilities and sales outlets can cope with these hazardous products. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.2.1.1. Objective, targets, indicators and measures concerning the protection of professional users in sales channels and storage

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To promote good practice in plant protection product handling and to ensure that facilities are suitable (distribution, sale, storage)	No of distribution and sales outlets monitored	5% annual increase compared to 2011-2013 average	DGAV	**M17:** Monitoring and control of plant protection product distribution, sale and storage **M19:** Authorisation to engage in activity **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	% of non-compliances recorded in monitoring distribution and sales outlets	5% annual decrease compared to 2011-2013 average	DGAV	
	No of distribution and sales outlets inspected	5% annual increase compared to 2011-2013 average	ASAE	
	% of non-compliances in distribution and sales	5% annual decrease compared to 2011-2013 average	ASAE	
	No of holdings inspected within cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances in storage on the agricultural holding	5% annual decrease compared to 2011-2013 average	IFAP-DGAV	

2.3.2.2. Reduction of operator exposure

Operators are exposed to the products they apply. Besides improving training skills it is therefore essential to promote the use of Personal Protective Equipment and to ensure that the respective authorised conditions of use are complied with, thus guaranteeing operator protection. It is also important to ensure that application equipment functions correctly. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.2.2.1. Objectives, targets, indicators and measures to reduce operator exposure

Objective	Indicator	Target	Body responsible for indicator	Measures
To promote the correct application of plant protection products	% of conformity of application equipment	5% annual increase by 2016	CIPP-DGAV	**M16:** Detailed timely dissemination of authorised uses **M18:** Monitoring and control of the land-based application of plant protection products **M20:** Inspection of plant protection product application equipment **M22:** Monitoring and control of the aerial application of plant protection products **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	No of holdings inspected within cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances with authorised conditions of use of PPP	5% annual decrease compared to 2011-2013 average	IFAP-DGAV	
To promote the use of adequate PPE	No of surveys answered	5% annual increase by 2014	DGAV	**M21:** Promote the use of PPE **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	% of operators who use PPE	5% annual increase by 2014	DGAV	
	% of operators who use PPE in accordance with the label	5% annual increase by 2014	DGAV	

2.3.2.3. Restrictions on the use of particular categories of plant protection products

The objective defined within this line of action is to prevent persons without proper training from using specialist application products by appropriately certifying and monitoring the use of such products, both in sales channels and during use.

Table 2.3.2.3.1. Objectives, targets, indicators and measures to restrict the use of particular categories of plant protection products to professional users

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To prevent persons who are not properly qualified from using specialist application plant protection products	Quantity (kg) of specialist application products without a record of the professional operator number when the sale is recorded	0 (zero) kg on conclusion of validity of the plan	ASAE	**M17:** Monitoring and control of plant protection product distribution, sale and storage **M18:** Monitoring and control of the land-based application of plant protection products **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	Quantity (kg) of specialist application products found in depots of operators who are not properly qualified	0 (zero) kg on conclusion of validity of the plan	DGAV	
	Quantity (kg) of products applied by operators who are not properly qualified	0 (zero) kg on conclusion of validity of the plan	DGAV	

2.3.3. Protection of non-professional users

The protection of non-professional users is a health and safety issue in handling and applying plant protection products in a non-professional context, i.e. application by the general public in a domestic context or in family vegetable gardens. Mandatory certification cannot be imposed because the numbers involved are too great. The risks not only include acute poisoning due to ad hoc accidental contact, but also the risk of chronic and subchronic exposure in the case of intensive amateur users.

The following lines of action have been defined for this policy area:

- restrictions on the use of particular categories of plant protection products;
- awareness-raising on the risks associated with their use.

The principal protection measure for non-professional users is to restrict their access to a limited category of plant protection products. Lines of action which raise these users' awareness of the risks associated with the use of such products and the promotion of general good practice in their use are also provided for. A further aim is to ensure that these users are given adequate advice in sales outlets for this category of product, as established in current legislation.

2.3.3.1. Restrictions on the use of particular categories of plant protection products

The objective defined for this line of action (Table 2.3.3.1.1) is to prohibit the use of plant protection products for professional use by persons without proper training who are therefore not qualified to handle and use them.

Table 2.3.3.1.1. Objectives, targets, indicators and measures concerning restrictions on the use of particular categories of plant protection products by non-professional users

Objective	Indicator	Target	Body responsible for indicator	Measures
To prevent persons who are not properly qualified from using plant protection products for professional use	Quantity (kg) of products for professional use without a record of the professional operator number when the sale is recorded (to be measured from 2016)	0 (zero) kg on conclusion of validity of the plan	ASAE	**M17:** Monitoring and control of plant protection product distribution, sale and storage

2.3.3.2. Awareness-raising on the risks associated with the use of plant protection products

The objectives identified under this line of action are to increase non-professional users' awareness of the risks associated with the use of plant protection products and to improve the advice given at the time of sale of non-professional products. The aim is to improve the general public's understanding of indications on the label of plant protection products for non-professional use. Table 2.3.3.2.1 shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.3.2.1. Objectives, targets, indicators and measures concerning awareness-raising on the risks associated with the use of plant protection products by non-professional users

Objective	Indicator	Target	Body responsible for indicator	Measures
To increase non-professional users' understanding of the risk associated with the use of plant protection products	No of awareness-raising activities for non-professional users	5 per year	DGAV	**M11:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by non-professional users
	No of protocols entered into with local authorities	25 per year	DGAV	
	No of sales outlets of PPP intended exclusively for non-professional use contacted	100 per year	DGAV	
To improve the advice given at the time of sale of products for non-professional use	No of sales outlets of PPP intended exclusively for non-professional use inspected (DL 101/2009)	5% annual increase compared to 2011-2013 average	ASAE	**M11:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by non-professional users
	% of infringements of requirements for sales under DL 101/2009	5% annual decrease compared to 2011-2013 average	ASAE	**M17:** Monitoring and control of plant protection product distribution, sale

	No of sales outlets of PPP intended exclusively for non-professional use contacted	100 by the end of validity of the plan	DGAV	and storage

2.3.4. Protection of third parties, including vulnerable groups

The following lines of action are defined for this policy area:

- regulation of aerial and land-based applications in urban and recreational areas and communication routes;
- regulation of land-based applications in agricultural and forestry areas;
- reduction in poisoning.

The protection of third parties in applying plant protection products involves a broad range of persons who are not involved with but who may be directly affected by the treatments applied: agricultural workers who may come into contact with residues on crops due to the application of plant protection products; persons in the vicinity of treatments in adjoining locations who may be subjected to spray or dust drift from applications; persons who may inadvertently handle plant protection products in complete ignorance of the risks involved.

2.3.4.1. Regulation of aerial and land-based applications in urban and recreational areas and communication routes

This line of action seeks to reduce the risks to third parties from applications of plant protection products which are subject to specific legislation. It not only seeks to ensure compliance with the particular legislation governing aerial applications and applications in urban and recreational areas and communication routes, but also to reduce the risks involved in such types of use. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.4.1.1. Objectives, targets, indicators and measures concerning the regulation of aerial and land-based applications in urban and recreational areas and communication routes

Objective	Indicator	Target	Body responsible for indicator	Measures
To reduce risks of exposure to aerial applications	No of aerial application inspections	5% annual increase by 2014	DGAV INAC	**M22:** Monitoring and control of the aerial application of plant protection products **M23:** Certification of aerial application service providers **M24:** Authorisation of aerial application plans **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training
	% of aerial application infringements	5% annual decrease by 2014	DGAV INAC	

				provision
To reduce risks of exposure to applications in urban and recreational areas and communication routes	No of inspections of applications in urban and recreational areas and communication routes	5% annual increase by 2014	DGAV	**M18:** Monitoring and control of the land-based application of plant protection products **M19:** Authorisation to engage in activity **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	% of infringements of applications in urban and recreational areas and communication routes	5% annual decrease by 2014		

2.3.4.2. Regulation of land-based applications in agricultural and forestry areas

This line of action seeks to reduce the risks to workers and third parties from the land-based application of plant protection products in agricultural and forestry areas, whether via application equipment and techniques or via careful selection of the products used. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.4.2.1. Objectives, targets, indicators and measures concerning the regulation of land-based applications in agricultural and forestry areas

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To reduce risks in adjacent parcels	% of equipment with anti-drift nozzles inspected	5% annual increase by 2014	DGAV	**M20:** Inspection of plant protection product application equipment **M25:** Promotion of risk mitigation measures **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
To promote the use of less toxic PPP	Ratio of products marketed T+/Total, T/Total (t.)	–	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision

2.3.4.3. Reduction in poisoning by plant protection products

The objectives of this line of action are to ensure that third parties cohabiting with professional users, particularly children, are not exposed to potential risks by accidentally handling products whose hazardous nature they are unaware of. Steps must be taken to ensure that plant protection products (in the commercial channel or in professional users' depots) are stored in an area prohibited to third parties who are unaware of the risks involved in handling them. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.3.4.3.1. Objectives, targets, indicators and measures to reduce poisoning by plant protection products

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To reduce the number of poisonings	No of incidents involving adults	25% annual decrease compared to 2011-2013 average	INEM/CIAV	**M17:** Monitoring and control of plant protection product distribution, sale and storage **M26:** Collection of statistics on incidents involving plant protection products **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	No of incidents involving children	25% annual decrease compared to 2011-2013 average	INEM/CIAV	
	No of distribution and sales outlets subject to monitoring	5% annual increase compared to 2011-2013 average	DGAV	
	% of non-compliances in the monitoring of distribution and sales outlets	5% annual decrease compared to 2011 – 2013 average	DGAV	
	No of distribution and sales outlets inspected	5% annual increase compared to 2011-2013 average	ASAE	
	% of non-compliances in distribution and sales	5% annual decrease compared to 2011 – 2013 average	ASAE	
	No of holdings inspected under cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	

	% of non-compliances in the storage of PPP on the agricultural holding	5% annual decrease compared to 2011 – 2013 average	IFAP-DGAV	

All the action records and the action to be taken under each measure to achieve the objectives of this strategic axis can be found in Annex I, which also lists the bodies responsible for coordinating and implementing the different actions.

2.4. Strategic axis 2: Environmental protection

The agricultural landscape is the visible result of the activities of agricultural communities, adapted to the physical limitations of the natural environment. This landscape varies with the topography, the agricultural system adopted and the intensity of the production system.

Most agricultural systems involve a multiplicity of cultivated and uncultivated areas separated by landscape features such as field borders, watercourses, roads, etc., forming a diverse patchwork in the rural landscape.

The increasing demand for large quantities of high-quality food, however, has exerted great pressure on the production sector, particularly in terms of increasing agricultural output, often to the detriment of the natural landscape, with a reduction or gradual elimination of landscape features such as natural borders and riverside and refuge areas.

The use of plant protection products in this context may have negative effects on the environment, the aquatic environment being particularly sensitive, especially with respect to surface and groundwater contamination. Possible effects on biodiversity, particularly non-target organisms such as auxiliary organisms and bees, should also be taken into account.

In the context of this strategic axis and in the framework of the use of plant protection products, environmental protection and its guaranteed sustainability involves action in two fundamental policy areas within which lines of action and quantitative objectives have been defined:

- **Protection of water resources** from point-source and diffuse contamination by plant protection products and their residues by reinforcing good practice in the storage, handling, application and management of such residues on agricultural and forestry holdings, urban and recreational areas and communication routes. Structures supporting and providing advice to professional users must also be strengthened, supplemented by action to monitor and control compliance with existing regulations.

- **Biodiversity protection** by promoting ecological infrastructure on holdings which represents a depository for auxiliary species in plant protection control, but also by reinforcing the implementation of existing regulations and monitoring the correct adoption of risk mitigation measures defined by the competent authorities. Particular emphasis in this area must be given to the social and economic component of the impact on crop productivity of maintaining or promoting beneficial species, especially pollinating organisms.

The implementation of objectives and measures within this strategic axis basically seeks to foster the permanent adoption of practices making it possible to ensure the good status, ecological potential and good chemical composition of surface and groundwater bodies and to incorporate into common agricultural practices behavioural standards which conserve nature, including water resources, and maintain the biodiversity of the associated natural and rural ecosystems at satisfactory levels. These objectives essentially involve raising the awareness that the natural environment (and its preservation) can contribute positively to agricultural activity and represents a social and landscape asset that must be preserved.

Having defined the policy areas, the quantitative objectives to be established and the lines of action under which measures to achieve the objectives of the NAP will be developed will

now be set out.

2.4.1. Protection of water resources

2.4.1.1. Application and reinforcement of measures to mitigate the risk of contamination of water bodies and protection of drinking water abstraction

As has already been said, the imposition of risk mitigation measures arises in the normal course of the authorisation of plant protection products provided for in current legislation on the placing of these products on the market, i.e. Regulation (EC) No 1107/2009 of 21 October 2009, and their implementation is reflected in strict compliance with the conditions laid down on the labelling of such products and/or in the official information issued by the competent official body.

Although the authorisation to market a particular plant protection product involves compliance with a broad range of requirements, it should not be forgotten that such products may still present risks to people and to the environment. Strict compliance with the conditions of use set out on the labels should help to minimise these risks, though a variety of measures also promoted by official bodies exist and contribute towards reducing them.

Law No 26/2013 provides for measures which reduce these risks, particularly in relation to the protection of water resources. This Law and the guidelines and conditions established in the codes of conduct on the safe use of plant protection products published by the DGAV must be respected. In addition, prior to their use the most appropriate products with the least side effects on human health, non-target organisms and the environment must be selected from among the products authorised to resolve a particular plant protection problem, taking local conditions into account.

In these circumstances, in addition to complying with the conditions laid down on the labels and ensuring awareness-raising, training and the provision of advice to users, other relevant actions must also be put into effect, i.e. careful selection of the plant protection products to be used, appropriate pesticide storage, correct preparation of mixtures in appropriate locations, inspection and calibration of application equipment, preferential use of low-drift application equipment, establishment of buffer zones, avoidance of direct contamination of water abstraction, correct disposal of pesticide packaging and surplus mixture, and awareness-raising, training and the provision of advice to farmers and forestry producers, pesticide operators and farm technicians.

Preference should be given with respect to the selection of plant protection products to those that meet the following conditions as a whole: they are not classified as dangerous for the aquatic environment (under Directive 1999/45/EC) or as priority substances (under Directive 2000/60/EC), and they are low-risk (within the meaning of Regulation (EC) No 1107/2009). It should also be noted that the use of plant protection products must be incorporated into integrated pest management systems.

Since the safety requirements to be met in preparing and applying these products are currently not systematically verified on agricultural and forestry holdings and with land-based application companies, it is not possible to determine the degree of compliance with the conditions established on the labels, the respective requirements to be met by professional users being laid down in Law No 26/2013. It is therefore first necessary to develop measures allowing field monitoring of the implementation of precautions for use, while at the same time promoting investment in training and raising awareness of the importance of strict compliance with such measures, an action which has the greatest impact on professional users.

These measures include those intended to prevent the use of plant protection products along water bodies (beds and banks, according to the legal definitions), except in strictly authorised conditions, while forest and vegetation clearance must be carried out preferably by manual and/or mechanical means. Only where it has been deemed necessary may plant protection products be used along water bodies, when preference must be given to the least hazardous products (which do not contain priority substances and which are not classified as hazardous to aquatic organisms). The application of plant protection products in crops sown or planted on the banks or even beds of water bodies, such as rice, must be treated with special care in terms of type of product, application periods and quantities to be applied, and preference must also be given to products that do not contain priority substances or priority hazardous substances. The application of plant protection products in irrigation systems also requires special care to avoid water body contamination, particularly direct contamination by the water abstraction itself.

The meaning of 'water bodies' must be clarified in the context of this NAP, adopting for that purpose the definition in the *Lei da Água* [Water Law] (Law No 58/2005 of 29 December 2005, as amended by Decree Law No 130/2012 of 22 June 2012): 'A body of surface water means a discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water. A body of groundwater means a marked environment of groundwater within an aquifer or aquifers'.

With respect to protecting the abstraction of water for public supply, the requirements set out in the rules and planning instruments must be observed. Certain constraints must be satisfied within both surface and groundwater abstraction protection perimeters. In order to protect lakes and reservoirs the legislative provisions (i.e. those in Decree Law No 107/2009 of 15 May 2009) and the provisions in reservoir management plans (RMP) must be complied with when they exist. Such measures must be validated on the ground, and once again awareness must be raised of the need for national regulations and planning instruments in this area to be observed (River Basin Management Plans and RMP). Moreover, and in accordance with the law, organisations that manage public supply systems must monitor a range of pesticides defined by the DGAV by 31 June each year, providing an additional guarantee of water quality.

In the case of abstraction for private or personal consumption (as defined in Article 7(1)(b) of Decree Law No 306/2007 of 27 August 2007), particularly boreholes and wells on an agricultural holding, the quality standards for drinking water do not apply and water treatment systems capable of removing pollutants do not exist, leaving the respective users particularly exposed when water is contaminated. They must therefore be made aware of the need to adopt precautionary measures in water abstraction protection areas similar to those envisioned for public supply in order to safeguard their own health and that of their families.

Special measures should also be taken to combat the common incorrect practice of preparing mixtures and washing equipment, very often involving discharges of residues into the soil or into water, close to water abstraction sites (boreholes, wells) that supply water for personal use and water used in dilutions and in washing.

Although data on the quality of drinking water provided by the competent authority do not raise concerns, since as yet no cases of exceeding the parametric values have led to an identified risk to consumers, they do suggest the need for sources of contamination to be located initially, and for farmers' practices to be surveyed to establish whether contamination problems are actually caused by an authorised practice, or on the contrary by failing to comply with such a practice, a matter that must always be corrected by whoever handles,

applies or manages plant protection product residues.

Table 2.4.1.1.1 shows the objectives, targets, indicators and measures defined within this line of action. The objective of reducing surface and groundwater contamination levels has been established to ensure the necessary coordination of the objectives defined in Directive 2009/128/EC, transposed into Law No 26/2013, and Directive 2000/60/EC of 23 October 2000, which establishes a framework for Community action in the field of water policy, transposed into national law by Law No 58/2005 of 29 December 2005 – the Water Law – and by Decree Law No 77/2006 of 30 March 2006. In this context, meeting the objectives defined should ensure that by 2015 the good status/ecological potential and good chemical status of surface water and the good quantitative and chemical status of groundwater are guaranteed (notwithstanding the extensions and derogations provided for), as specified in Article 4 of the Water Framework Directive and Article 45 *et seq*. of the Water Law.

Specifically as regards the protection of surface and groundwater against contamination by plant protection products, assurance must be provided that such contamination does not compromise the good status of surface water bodies and the good chemical status of groundwater bodies.

Table 2.4.1.1.1. Objectives, targets, indicators and measures concerning the application and enhancement of action to mitigate the risk of contamination of water bodies and drinking water abstraction

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To reduce surface and groundwater contamination levels	Rate of non-compliance with EQS for surface water and QS for groundwater	Those provided for in the Portuguese Water Law and set out in River Basin Management Plans	APA	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M27:** Reinforce good practice in the application of plant protection products **M18:** Monitoring and control of the land-based application of plant protection products **M28:** Implement an aerial application authorisation,
	Rate of presence of anti-drift nozzles on sprayers inspected	5% annual increase by 2015	DGAV	
	Rate of marketing of PPP dangerous for the aquatic environment	–		
	Rate of marketing of PPP containing priority substances	–		
	Rate of non-compliance with parametric values for pesticides in drinking water	That provided for in applicable legislation	ERSAR/ DGAV	
	No of holdings inspected within cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	

	% of non-compliances with conditions of use of PPP	5% annual decrease compared to 2011-2013 average	IFAP/DGAV	recording and monitoring system
	Rate of non-compliance with safety requirements in applying PPP	5% annual decrease by 2015	DGAV/ DRAPs	
To improve the conditions of storage of plant protection products on agricultural and forestry holdings	% of non-compliances in the storage of PPP on agricultural holdings	5% annual decrease compared to 2011-2013 average	IFAP/DGAV	
	Rate of non-compliance with safety requirements in applying PPP	5% annual decrease by 2015	DGAV/DRAPs	**M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M18:** Monitoring and control of the land-based application of plant protection products
	No of holdings inspected within cross-compliance	Cross-compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
To improve the conditions of storage of plant protection products in commercial channels	Rate of non-compliance with correct storage of PPP in the commercial channel	5% annual decrease compared to 2011-2013 average	ASAE	

2.4.1.2. Implementation of systems for managing plant protection product residues

Agricultural or forestry holdings and organisations providing land-based application services must implement permanent measures that can help to reduce environmental contamination, particularly measures that promote the appropriate management and elimination of plant protection product packaging and residues and surplus application mixtures and waste in proper environmental conditions, and good practice must be adopted in the handling and cleaning of application equipment.

Although proper management of plant protection product packaging waste is duly implemented on the ground and available data suggest that the respective trends are positive and may improve further as a result of recent measures taken by the respective management body, a national strategy has yet to be implemented on the management of obsolete products[4], which are still kept by farmers and forestry producers via installed capacity on their holdings. National measures must therefore be implemented as a matter of urgency to ensure the appropriate management of such waste, which, if not safely collected and sent for appropriate recovery or disposal, represents a potential source of local contamination of resources and an added risk for human and environmental safety.

[4] Obsolete product or residue of surplus plant protection products: an unusable plant protection product, contained in already opened packages stored with the end user, and plant protection products whose authorisation for sale and stock exhaustion period have already expired (c.f. D.L. 187/2006 of 19 September 2006).

The management of surplus mixture and contaminated water from washing plant protection product application equipment on agricultural and forestry holdings must also be improved. In order to overcome technical and economic constraints that may have a dissuasive effect on the acquisition of individual systems for treating such waste and waste water, units could be set up to provide this service which may meet users' needs better. The following table shows the objectives, targets, indicators and measures defined within this line of action.

Table 2.4.1.2.1. Objectives, targets, indicators and measures for implementing plant protection product waste management systems

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To increase the collection of empty plant protection product packaging waste	Quantity of PPP packaging waste collected/year (t.)	–	APA	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M29:** Reinforce the system for collecting and managing plant protection product packaging waste
	No of collection centres for empty PPP packaging	–	DGAV	
	Quantity of PPP packaging placed on the market/year (t.)	–	APA	
	Rate of collection of used PPP packaging waste	To be defined in licences/authorisations issued to packaging waste management organisations	APA	
	Rate of recycling/recovery of PPP packaging waste	To be defined in licences/authorisations issued to packaging waste management organisations	APA	
To implement the collection of seed packaging treated with plant protection products	Quantity of seed packaging placed on the market (t.)	–	APA/DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M29:** Reinforce the system for collecting and managing plant protection product packaging waste
	Rate of take-up by companies of a seed packaging management system	100% take-up by companies during validity of the NAP	APA	

To implement systems for treating effluents from preparing mixtures and cleaning equipment	No of effluent management systems certified	Certification of systems during validity of the NAP	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M30:** Promote good practice in managing plant protection product residues
	No of holdings taking up certified effluent management systems	–	DGAV	
To implement systems for collecting and managing residues of (obsolete) plant protection products	Quantity of residues of obsolete PPP collected (t.)	100% collection rate of residues of obsolete PPP by the end of the NAP	APA	**M31:** Promote proper management and disposal of residues of obsolete plant protection products **M30:** Promote good practice in managing plant protection product residues
		Establishment of the system for collecting and managing obsolete PPP during validity of the NAP	APA	

2.4.1.3. Promotion of the use and proper maintenance of application equipment

Adequate protection of natural resources against the impact of pesticides necessarily involves reducing their exposure to waste resulting from the application of such pesticides, which is also ensured by the use of application equipment which is in good working condition. The publication of Decree Law No 86/2010 and its provisions on mandatory periodic inspections of new and used plant protection product application equipment responds to these concerns. An important preliminary aspect of this process is to equip national inspection structures as a whole with the technical capacity to promote the appropriate use of such equipment and to withdraw equipment that does not comply with safety requirements. To support the inspection framework, however, proper maintenance and calibration of equipment must be promoted to ensure that plant protection treatments are more effective and that the respective products are applied in an environmentally safe manner.

The following table shows the objectives it is intended to achieve and the measures to be taken to do so.

Table 2.4.1.3.1. Objectives, targets, indicators and measures to promote the proper use and maintenance of

application equipment

Objective	Indicator	Target	Body responsible for indicator	Measures
To ensure the mandatory inspection of plant protection product application equipment	Rate of PPP application equipment inspected	100% of equipment in use inspected in 2016	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M32:** Implementation of the system for inspecting plant protection product application equipment
	Rate of approval of PPP application equipment inspected	5% annual increase in rate of approval of equipment compared to 2012 by the end of the NAP	DGAV	
	No of PPP application equipment inspectors certified	–	DGAV	
	No of CIPPs licensed	–	DGAV	
	No of CIPPs/NUTS II region	–		
	No of inspections of new PPP application equipment	–		
	Rate of inspection of new PPP application equipment acquired after 15 October 2010	100% of new equipment inspected within five years of the date of acquisition		
	New PPP application equipment placed on the market (number)	–	DGAV	

2.4.2. Habitat and biodiversity protection

2.4.2.1. Promotion of the protection of non-target organisms

Plant protection products are categorised in the authorisation process according to how intrinsically dangerous they are to the environment in general and to the aquatic environment in particular, in accordance with EU criteria for classifying dangerous substances and preparations. Since the vast majority of plant protection products are dangerous, their use involves risks, though these can be mitigated by appropriate and adequate measures to manage each product and its use. Professional users are therefore responsible for making an aware and informed choice of the plant protection product which is least dangerous to non-target organisms. This objective can be achieved principally through training and raising the awareness of both professional and non-professional users.

Besides the choice of plant protection product, having considered whether its use is necessary in the light of the alternative means available to resolve the respective plant protection issue, other complimentary aspects can also be considered which can help to preserve the

surrounding natural environment. The following table shows the objectives to be achieved and measures to be taken under this line of action.

Table 2.4.2.1.1. Objective, targets, indicators and measures to promote the protection of non-target organisms in applying plant protection products

Objective	**Indicator**	**Target**	**Body responsible**	**Measures**
To promote the use of plant protection products which are not dangerous to non-target organisms	Rate of presence of anti-drift nozzles on sprayers inspected	5% annual increase in presence of anti-drift nozzles by 2015	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M32:** Implementation of the system for inspecting plant protection product application equipment **M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M27:** Reinforce good practice in the application of plant protection products **M42:** Foster the official recording of auxiliary species **M18:** Monitoring and control of the land-based application of plant protection products **M22:** Monitoring and control of the aerial application of plant protection products
	Rate of marketing of PPP dangerous for the aquatic environment		DGAV	
	No of auxiliary species recorded (cumulative)	100% of species by 2018	DGAV	
	Rate of marketing of PPP hazardous to birds and fauna	–	DGAV	

2.4.2.2. Promotion of biodiversity protection

The maintenance and promotion of biodiversity involves more than protecting non-target organisms when applying plant protection products. According to Regulation (EC) No 1107/2009, biodiversity means ‘variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this variability may include diversity within species, between species and of ecosystems’. In the context of agricultural and forestry systems the aim is to reconcile production activities with the maintenance of high levels of quality in ecosystem services

through proactive management. This sustainability-enhancing balance will lead to the creation of economic conditions fostering maintenance of the values of nature conservation and biodiversity and of species beneficial to plant protection. Appropriate management of areas bordering growing areas can contribute significantly to the maintenance of a repository of beneficial organisms, including auxiliary organisms, in order to offset possible adverse effects on their populations within the area treated due to direct exposure to a plant protection product when it is applied. One of the most relevant agricultural and forestry system services is pollination. It has been estimated that some two thirds of agricultural crops grown for human consumption depend on this service, which has a direct impact on the sustainability of food production.

Recent problems in Europe involving bees, caused by plant protection products, have underscored the need for serious debate on this issue and for the implementation and enhancement of means of protection against the potential adverse effects of such products on these non-target organisms.

At the same time, the decline in pollinators has a direct impact on the biodiversity of forest plants and the life they support. The varied range of pollinators favouring different flowers and pursuing different seasonal activities throughout the day is crucial to ecosystem flora. Efforts to stem the decline in pollinators cannot focus solely on honey bees, which also depend on different components of the ecosystem. It is increasingly urgent to reinforce the conservation of pollinators in general. The following table shows the various objectives it is intended to achieve and the measures to be implemented under this line of action.

Table 2.4.2.2.1. Objectives, targets, indicators and measures to promote biodiversity protection

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To promote the adoption of agricultural and forestry practices protecting biodiversity	No of holdings taking up sustainable management practices	To be established during validity of the NAP under the Common Agricultural Policy	ICNF/DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M33:** Promote sustainable biodiversity management (on agricultural and forestry holdings and in urban and recreational areas and communication routes)
To promote the protection and development of pollinators	No of PPP hazardous to bees/Total number of PPP placed on the market	–	DGAV	**M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision
	No of recorded incidents with PPP affecting bees	To be established during validity of the NAP	FNAP/DGAV	**M33:** Promote sustainable biodiversity management (on agricultural and forestry holdings and in urban and recreational areas and communication routes)
	Pesticide residues detected in honey	According to the national residue control plan	DGAV	
	Rate of use of seed	100% of seed	DGAV/DRAPs	

	drills with baffle plates	drills with baffle plates by end of the NAP		**M9:** Promote training for the control bodies provided for under Law No 26/2013 **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users **M27:** Reinforce good practice in the application of plant protection products M34: Monitoring of the effects and risks of plant protection products on bees

All the action records and the action to be taken under each measure to achieve the objectives of this strategic axis can be found in Annex I, which also lists the bodies responsible for coordinating and implementing the different actions.

2.5. Strategic axis 3: Promotion of sustainable agricultural and forestry production systems

To promote agriculture with high-level consumption patterns which maintains the quality and quantity of food produced and an intervention system which minimises adverse effects on forest ecosystems while promoting natural mechanisms for combating harmful biotic agents, the development and adoption of alternative approaches for controlling crop and forest pests and reducing dependency on plant protection products must be encouraged.

The aim in this context is to promote the application by all professional users of general principles and specific guidelines covering integrated pest management for the various crops and forest species.

Integrated pest management seeks to combat crop and forest pests economically, effectively and with a lower human and environmental impact. In order to keep populations of such pests at harmless levels, rational, balanced and integrated use is made of all available means to combat them (genetic, cultural, biological and biotechnical), chemical methods only being adopted when there is no other alternative.

Consideration has also been given under this strategic axis to combating illegal applications of plant protection products, bearing in mind that the precautionary principle is inherent to their authorisation: the use of any product which has not been shown to be safe to use and consequently has not been authorised is not permitted. Any product that has not undergone an authorisation process avoids this verification procedure and is therefore illegal. Because there is no way of knowing the consequences of using an illegal product, their use is prohibited.

The following policy areas have been defined in this context:

- **adoption of general integrated pest management principles;**
- **promotion of the adoption of low chemical-input production methods;**
- **provision of means of protection to ensure the competitiveness of agricultural and forestry production;**
- **promotion of the responsible marketing and use of plant protection products.**

2.5.1. Adoption of general integrated pest management principles

The conditions necessary for adopting general integrated pest management principles and the appropriate incentives for applying crop-specific guidelines must be established within this policy area in accordance with Law No 26/2013. Moreover, the implementation of integrated pest management must be monitored to ensure that the respective general principles are applied by all professional users from 1 January 2014. The following lines of action have been defined in this context:

- provision of information and decision support tools for professional users;
- awareness-raising and provision of advice on integrated pest management for professional users;

- monitoring of the implementation of integrated pest management.

2.5.1.1. Provision of information and decision support tools for professional users

To guarantee the implementation and application of the general principles listed in Annex II to Law No 26/2013, technical regulations including the following information must be made available to professional users for the main crops/pest(s):

- pest bioecology;
- preventive or pest control measures;
- description of risk estimation methods, economic damage threshold (EDT) and harmfulness factors;
- mathematical forecasting models validated by *Estações de Avisos* [Agricultural Information Stations]/Farmers' and forestry producers' organisations at regional level;
- alternative methods available;
- information on the profile of authorised plant protection products, considering the spectrum of activity, conditions of use, side effects on humans, non-target organisms and the environment and resistance management strategies, where applicable;
- record books.

Table 2.5.1.1.1 shows the objectives, targets, indicators and measures to be taken in the context of this plan to ensure that the general integrated pest management principles envisaged are appropriately applied.

Table 2.5.1.1.1. Objectives, targets, indicators and measures for providing professional users with information and decision support tools

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To promote the provision of integrated pest management information and decision-making tools to professional users	% of major crops with technical guides defined/revised for IPM	50% of major crops revised by the end of the NAP	DGAV	**M35:** Provision of technical information to all professional users **M36:** Dissemination of information and decision-making tools by SNAA **M37:** Dissemination of information and decision-making tools by SAA **M3:** Foster operational networks proposing thematic research and innovation priorities
	No of crops with technical guides defined/revised for IPM	Two crops or groups of crops revised per year	DGAV	
	Average number of crops x pests monitored by Agricultural Information Stations	5% average annual increase compared to 2011-2013 average	DGAV/DRAPs	
	Number of farmers subscribing to the SNAA	5% average annual increase compared to 2011-2013 average	DGAV/DRAPs	

	Number of farmers subscribing to the SAA	–	GPP, DGADR, Farmers' organisations	
To create an authorised plant protection product information management system	Date of availability of the authorised PPP information management system	By end of 2014	DGAV	**M16:** Detailed timely dissemination of authorised uses
	% of users satisfied with plant protection product information	50% of users satisfied by end of the NAP	DGAV	

2.5.1.2. Awareness-raising and provision of advice on integrated pest management for professional users

Awareness-raising and provision of advice on integrated pest management to professional users is ensured by specially trained technicians with recognised experience in this field who work for the *Serviço Nacional de Avisos Agrícolas* (SNAA) [National Agricultural Information Service] and the *Serviço de Aconselhamento Agrícola* (SAA) [Agricultural Advisory Service].

The respective technical support is the responsibility of technicians recognised for that purpose under Decree Law No 256/2009 of 24 September 2009, as amended by Decree Law No 37/2013 of 13 March 2013, who provide services on an individual basis or through an organisation they form part of.

The recognition of integrated pest management technicians reflects the need for specific training which is essential to enable technicians and farmers to acquire the requisite skills.

Although it is not mandatory, such technical support allows professional users to apply the general and specific principles involved in this protection method.

The SNAA and the MAMAOT [Ministry for Agriculture, the Sea, the Environment and Regional Planning] play a relevant role in this context, providing professional users with specific technical information to support the selection of methods, and in the case of chemical methods must always promote products with the lowest risk to human health and the environment.

Reference must also be made to the relevant role of the SAA arising out of the application of Article 12 of Regulation (EC) No 73/2009 of 19 January 2009. The objective of the SAA is to provide farm advisory services to raise the awareness of and support farmers in complying with sustainable agricultural standards.

Table 2.5.1.2.1. Objectives, targets, indicators and measures for raising the awareness of and providing advice to professional users on integrated pest management

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To promote awareness-raising and the provision of advice on integrated pest management	No of awareness-raising activities per region (NUTS II)	At least two per region per year	DGAV	**M38:** Promote technical support for integrated pest management **M36:** Dissemination of information and decision-making tools by SNAA **M3:** Foster operational networks proposing demonstration activities under integrated pest management and the sustainable use of plant protection products [sic] **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M12:** Carry out and promote awareness-raising activities for professional users to ensure compliance with appropriate risk reduction measures in applying plant protection products and adopting integrated pest management principles
	No of technicians recognised for providing IPM technical assistance	–	DGADR	
	Average number of crops x pests monitored by Agricultural Information Stations	5% annual average increase compared to 2011-2013 average	DGAV/DRAPs	
	No of farmers subscribing to the SNAA	5% annual average increase compared to 2011-2013 average	DGAV/DRAPs	

2.5.1.3. Monitoring of the implementation of integrated pest management

In order to assess progress in reducing the risks and negative effects of the use of plant protection products on human health and the environment, monitoring plans must be put in place which enable the progress made in implementing general integrated pest management principles to be determined on the basis of a sample of professional users and predefined criteria. In this context the following table shows the measures, indicators and targets established to ensure the adoption and correct application of general integrated pest management principles.

Table 2.5.1.3.1. Objectives, targets, indicators and measures to monitor the implementation of integrated pest management

Objective	Indicator	Target	Body responsible for indicator	Measures
To ensure the adoption and correct application of general IPM principles	No of technicians recognised for providing IPM technical assistance	–	DGADR	**M38:** Promote technical support for integrated pest management **M18:** Monitoring and control of the land-based application of plant protection products **M22:** Monitoring and control of the aerial application of plant protection products **M5:** Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision **M12:** Carry out and promote awareness-raising activities for professional users to ensure compliance with appropriate risk reduction measures in applying plant protection products and adopting integrated pest management principles
	Rate of professional users in receipt of IPM technical assistance	–	DGAV/DRAPs	
	No of holdings inspected within cross-compliance	Cross compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances with the application of general IPM principles	5% annual decrease by 2014	IFAP-DGAV	

2.5.2. Promotion of the adoption of low chemical-input methods

With a view to reducing or minimising risks to human health and the environment, the aim is to reduce the use of plant protection products to economically and ecologically acceptable levels, not only through integrated pest management but also through sustainable production methods, particularly organic farming and integrated production. A line of action has therefore been defined to raise the awareness of professional users and provide them with advice on these methods.

2.5.2.1. Awareness-raising and provision of advice to professional users on organic farming and integrated production

Awareness-raising and the provision of advice to professional users on organic farming and integrated production is ensured by specially trained technicians with recognised experience in this field.

The respective technical support is the responsibility of technicians recognised for this purpose under Decree Law No 256/2009 of 24 September 2009, as amended by Decree Law

37/2013 of 13 March 2013, who provide services on an individual basis or through an organisation they form part of.

The recognition of technicians providing technical assistance to professional users in these sustainable production methods must therefore be encouraged and the acquisition of specific skills must be promoted.

The technical standards and guidelines required to put these methods into practice must be made available and widely disseminated. Dissemination may also be promoted by establishing demonstration fields/model farms.

Table 2.5.2.1.1. Objectives, targets, indicators and measures to promote the adoption of low chemical-input production methods

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To encourage the dissemination of organic and integrated production methods	No of technicians recognised under MPI [sic: PRODI/IP?] and OP	–	DGADR	**M39:** Promote technical support for organic and integrated production **M40:** Provision of IP and OP technical standards **M2:** Support the inclusion of knowledge in the technical guides for sustainable production methods and identify gaps in knowledge to guide future research. **M12:** Carry out and promote awareness-raising activities for professional users to ensure compliance with appropriate risk reduction measures in applying plant protection products and adopting integrated pest management principles **M13:** Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users
	% of major crops with technical guides defined/revised for IP and OP	15% of major crops by the end of the NAP		
	No of crops with IP and OP technical guides updated	1 (one) crop or groups of crops per year		
	No of MPI [sic: PRODI/IP?] and OP demonstration farms	At least one demonstration farm per region	DGADR	

2.5.3. Provision of means of protection to ensure the competitiveness of agricultural and forestry production

The following lines of action were chosen for this policy area to ensure the viability of sustainable agricultural and forestry production:

- **secure sufficient means of protection to achieve equal competition;**

- **reinforce communication between the authorities, production, industry and distribution.**

2.5.3.1. Secure sufficient means of protection to ensure equal competition

Portugal's physical and human geography, heavily altered over the centuries by human intervention, encompasses a huge variety of conditions favourable to the cultivation and exploitation of countless agricultural crops and forest species. This gives rise to many associated plant health problems which call for a crop and forest protection strategy involving the intensive use of the various available means, particularly chemical methods. Plant health products must therefore be sufficient in number and chemical diversity to counter resistance by crop and forest pests.

It must be borne in mind, however, that solutions for existing and future plant health problems require not only greater availability of active substances, but also investment by the plant protection industry in extending the use of products already authorised to that end.

Measures have accordingly been taken at national level to promote the authorisation of products, particularly for crops which are less economically important in Portugal (minor uses), with the introduction in 2009 of the procedure for mutual recognition of authorisations for sale granted to plant protection products on the basis of EU-approved active substances which had already been authorised in southern European countries.

In order to eliminate as far as possible the obstacles to trade in plant protection products due to the existence of different levels of protection in Member States, Regulation (EC) No 1107/2002 of 21 October 2002 laid down harmonised rules concerning the placing of these products on the market, including rules on the mutual recognition of authorisations and on parallel trade with a view to increasing the free movement of such products and ensuring equal competition in access to them in all Member States.

The aim is therefore to contribute towards swifter simultaneous access by professional users to the new plant protection products, reducing competitive bottlenecks, avoiding illegal trade and harmonising decision-making procedures, though different decisions can be taken on a justified case-by-case basis under the principle of subsidiarity. A further aim is to favour fairer and more balanced access to the market for plant protection product undertakings by regulating data protection and parallel trade.

Mutual recognition favours greater availability of plant protection products since the authorisations granted by one Member State must be accepted by other Member States, provided their agricultural, plant health and environmental conditions (including climate) are comparable. In this context Table 2.5.3.1.1 lists the objectives, targets, measures and indicators that can be established to promote a more harmonised market for these products.

Table 2.5.3.1.1. Objectives, targets, indicators and measures concerning crop protection to ensure equal competition

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To reduce the number of aims not covered and/or insufficiently covered	No of aims considered not covered and/or insufficiently covered/Total number of aims not covered	5% average annual decrease compared to 2011-2013 average	DGAV	**M41:** Foster new solution**s**
To promote the availability of sustainable alternative means of protection (organic, physical, biotechnical and other non-chemical methods)	No of auxiliary species recorded (cumulative)	100% of species recorded by 2018	DGAV	**M42:** Foster the official recording of auxiliary species
	To be defined according to subsequent programming period	–	DGAV/GPP	**M43:** Foster the use of alternative practices and techniques
	No of alternative solutions available (cumulative)	–	DGAV	
To promote equal competition in access to means of protection	No of products and aims authorised on the basis of MR (cumulative)	–	DGAV	**M41:** Foster new solutions
	No of products authorised on the basis of parallel trade (cumulative)	–	DGAV	

2.5.3.2. Reinforce communication between the administration, production, industry and distribution

To be able to discuss Portugal's plant health situation and find solutions for key or emerging pests which are harmful to agroforestry ecosystems, platforms must be set up to ensure communication and understanding between the authorities, industry and production. Specific measures to be developed to ensure these objectives must therefore be defined.

Table 2.5.3.2.1. Objectives, targets, indicators and measures to improve communication between the administration, production, industry and distribution

Objective	Indicator	Target	Body responsible for indicator	Measures
To promote communication platforms between the administration, production, industry and distribution	No of platforms set up or accessible	1 platform	DGAV	**M44:** Adapt and manage communication platforms
	No of accesses to communication platforms	10% annual increase in number of accesses in 2014-		
	No of technical documents included on platform	At least 50 documents per year		
To set up a management information system for authorised plant protection products	Date of provision of PPP management information system	By end of 2014	DGAV	**M16:** Detailed timely dissemination of authorised uses
	% of users satisfied with plant protection product information	50% of users satisfied by the end of the plan		

2.5.4. Promotion of the responsible marketing and use of plant protection products

Good practice in the distribution, sale and application of plant protection products ensures the health and safety of professional users. Good practice can be self-imposed on a voluntary basis, other professionals can be encouraged to adopt good practice, and good practice can be promoted by monitoring and control.

The aim in this policy area is not only to make the market for illegal products unviable by prohibiting such products throughout commercial channels, starting from their entry at national borders, but also to ensure that product labelling in commercial channels complies with the authorisations in force. The following lines of action have been established for this policy area:

- tightening control of the plant protection product marketing channel;
- tightening control of the use of plant protection products.

5.2.4.1. Tightening control of the plant protection product marketing channel

The success of any regulatory system can and should be determined by adequate monitoring and control which ultimately enables the effectiveness of compliance with legal provisions to be validated. This model naturally applies to the placing of plant protection products on the market. On the ground and more specifically in the context of this line of action, it is important to verify whether products sold comply with the conditions laid down by the competent authority in order to ensure that they are handled and used safely. The following table shows the specific objectives and the measures to be taken to meet them with a view to tightening controls in plant protection product marketing and distribution channels.

Table 2.5.4.1.1. Objectives, targets, indicators and measures to tighten control of the plant protection product marketing channel

Objective	Indicator	Target	Body responsible for indicator	Measures
To combat the import, distribution and sale of illegal plant protection products	% of non-compliances due to the distribution and sale of illegal plant protection products	5% annual average decrease in non-compliances	ASAE	**M17:** Monitoring and control of plant protection product distribution, sale and storage
	No of prosecutions/ No of establishments inspected	–		
	No of establishments inspected	At least 50 establishments inspected/year		
	No of prosecutions/ No of vehicles carrying plant protection products inspected	–	Competent police authorities	**M45:** Reinforce the monitoring of plant protection product transport
	No of training activities for control bodies/year	At least one per year	DGAV	**M9:** Promote training for the control bodies provided for under Law No 26/2013
To combat the distribution and sale of plant protection products by unlicensed organisations	No of complaints brought	–	ASAE	**M46:** Reinforce the monitoring of distribution and sales in unlicensed outlets
	No of prosecutions relating to the sale of PPP/No of unlicensed organisations inspected	5% annual decrease compared to 2011-2013 average		
	No of unlicensed organisations inspected	5% annual increase compared to 2011-2013 average		
To ensure that the labelling of authorised products complies with the authorisations granted	% of packaging detected with illegal labels	0 (zero) by the end of the NAP	DGAV	**M47:** Monitoring and control of labelling, packaging and the respective formulations
	No of packages inspected/year	5% of packaging of authorised products	DGAV	
	No of samples not complying with authorisation granted/No of samples analysed under DGAV control	0 (zero) by the end of the NAP	DGAV	
	No of samples analysed under DGAV control	5% of products authorised	DGAV	

5.2.4.2. Tightening control of the use of plant protection products

In parallel with the preceding point and to supplement the monitoring and control of

commercial activities concerning plant protection products, these measures must be extended to users of these products. The following table shows the specific objectives and respective measures to achieve this in order to reinforce plant protection product control at professional user level.

Table 2.5.4.2.1. Objectives, targets, indicators and measures to tighten control of the use of plant protection products

Objective	**Indicator**	**Target**	**Body responsible for indicator**	**Measures**
To combat the use of illegal products	% of packaging of illegal products collected by management systems	2% annual decrease compared to 2010	Management systems	**M17:** Monitoring and control of plant protection product distribution, sale and storage **M18:** Monitoring and control of the land-based application of plant protection products **M22:** Monitoring and control of the aerial application of plant protection products
	No of holdings inspected within cross-compliance	Cross compliance control rate	IFAP	
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances with the use of unapproved PPP	5% annual decrease compared to 2011-2013 average	IFAP/DGAV	
To combat the use of authorised products for unauthorised purposes	No of holdings inspected within cross-compliance	Cross compliance control rate	IFAP	**M17:** Monitoring and control of plant protection product distribution, sale and storage **M18:** Monitoring and control of the land-based application of plant protection products **M22:** Monitoring and control of the aerial application of plant protection products
	No of holdings inspected outside cross-compliance	100 in 2014 and a 5% annual increase	DGAV	
	% of non-compliances with authorised conditions of use	5% annual decrease compared to 2011-2013 average	IFAP/DGAV	
	% of MRL infringements through use for unauthorised purposes	3% annual decrease compared to 2011-2013 average	DGAV	

All the measures and the action to be taken under each measure to achieve the objectives of this strategic axis can be found in Annex I, which also lists the bodies responsible for coordinating and implementing the different actions.

3. Implementation of monitoring and surveillance of compliance with National Action Plan objectives

Article 50 of Law No 26/2013 provides for indicators to be established to determine the impact of the measures put in place to reduce risks associated with the use of plant protection products.

Various indicators have been established in the NAP according to the type of objective to be achieved, some of which have already been used in connection with the use of plant protection products, while others are defined for the first time.

The proposed indicators are essentially descriptive and are therefore easy to implement and interpret, providing a general overview of the real circumstances to be examined. The following table lists the various indicators established in this NAP, characterised according to type and associated with the various measures established under the Plan.

Measure	**Type of indicator**	**No**	**Indicator**
M1, M2	Social	1	No of workgroups set up
M1	Social	2	No of platforms set up/ accessible
M1	Social	3	No of accesses to IPM thematic platforms, health and environmental impact of PPP and indicators of sustainable use
M1	Social	4	No of technical and technical-scientific documents included on the thematic platforms
M3, M4	Social	5	No of RTD projects initiated during validity of the NAP
M5, M6, M7	Social	6	Content of mandatory training activities updated (Y/N)
M5, M6, M7	Social	7	No of training activities/year
M5, M6, M7	Social	8	No of trainees qualified/year
M5, M6, M7	Social	9	No of certificates issued in different training activities/year
M5, M6, M7	Social	10	Implementation and assessment of knowledge tests defined (Y/N)
M5	Social	11	No of knowledge tests/year

M5	Social	12	No of professional users qualified by a knowledge test/year
M9	Social	13	Content of training activities for control bodies defined (Y/N)
M5	Social	14	Content of training activity for aerial agricultural operators defined (Y/N)
M5	Social	15	No of aerial agricultural operators trained/year
M6	Social	16	No of trainers in the reserve during validity of the NAP
M7	Economic	17	Funding proposal negotiated and delivered by higher authority (Y/N)
M8	Social	18	No of organisations in the communications network
M8	Social	19	No of applications for training received on platform set up
M9	Social	20	No of training activities for control bodies/year
M10	Social	21	Content of b-learning training activities defined (Y/N)
M10	Social	22	No of b-learning training activities/year
M11	Economic	23	No of protocols entered into with local authorities
M11	Social	24	No of establishments contacted
M12	Social	25	No of awareness-raising activities for non-professional users
M12	Social	26	No of awareness-raising activities for professional users
M13	Social	27	Code of conduct on PPP distribution and sales channels updated (Y/N)
M13	Social	28	Code of conduct on the application of PPP published and disseminated (Y/N)
M13	Social	29	% of satisfied users of the plant protection product website (survey)
M13	Social	30	No of themes with FAQ disseminated

Ml3	Social	31	No of workshops for trainers
M13	Social	32	No of actions to disseminate legislation
M13	Social	33	No of active communication platforms
M13	Social	34	No of actions connected to private organisation projects
M13	Social	35	No of alert notices issued
M13	Social	36	No of technical documents drawn up
M13	Social	37	Technical manual for preparing aerial application plans drawn up and disseminated (Y/N)
M13	Social	38	No of crops with IPM technical documents updated/year
M13	Social	39	No of crops with IP and OP technical guides updated during validity of the NAP
M14	Social	40	No of surveys answered in sales outlets
M14	Social	41	No of surveys answered in training activities
M14	Social	42	No of surveys answered on agricultural holdings
M15	Social	43	No of pesticides tested
M15	Social	44	Total number of samples analysed
M15	Social	45	Total number of different foods analysed
M15	Social	46	No of non-compliances with MRLs with risks for consumers
M17	Social	47	No of distribution and sales outlets inspected
M17	Social	48	% of prosecutions brought
M17, M19	Social	49	No of distribution and sales outlets monitored

M17	Social	50	% of non-compliances recorded in monitoring distribution and sales outlets
M15	Social	51	No of non-compliances with MRLs
M17, M18	Social	52	No of holdings inspected within cross-compliance
M17, M18	Social	53	No of holdings inspected outside cross-compliance
Ml8	Social	54	% of non-compliances with the use of unapproved PPP
M15, M18	Social	55	% of non-compliances with authorised conditions of use of plant protection products
M17	Social	56	% of non-compliances in distribution and sales
M17	Environmental	57	% of non-compliances in storage of PPP on the agricultural holding
M18, M20	Environmental	58	% of conformity of application equipment
M21	Social	59	No of surveys answered
M21	Social	60	% of operators who use PPE
M21	Social	61	% of operators who use PPE in accordance with the label
M17, M18	Social	62	Quantity (kg) of specialist application products without a record of the professional operator number when the sale is recorded
M18	Social	63	Quantity (kg) of specialist application products found in depots of operators who are not properly qualified
M18	Social	64	Quantity (kg) of products applied by operators who are not properly qualified (application records)
M17	Social	65	Quantity (kg) of products for professional use without a record of the professional operator number when the sale is recorded (to be measured from 2016)

M11	Social	66	No of awareness-raising activities for non-professional users
M11	Social	67	No of sales outlets of plant protection products intended exclusively for non-professional use contacted
M11.M17	Social	68	No of sales outlets of plant protection products intended exclusively for non-professional use inspected (DL 101/2009)
M11, M17	Social	69	% of infringements of requirements for sales under DL 101/2009
M22	Social	70	No of aerial application inspections
M22	Social	71	% of aerial application infringements
M18	Social	72	No of inspections of applications in urban and recreational areas and communication routes
M18	Social	73	% of infringements of applications in urban and recreational areas and communication routes
M20, M25	Environmental	74	% of equipment with anti-drift nozzles inspected
M14, M18, M22	Environmental	75	Ratio of products used T+/Total, T/Total (quantity)
M17, M26	Social	76	No of incidents involving adults
M17, M26	Social	77	No of incidents involving children
M13, M27	Environmental	78	Rate of non-compliance with EQS for surface water and QS for groundwater
M20, M27, M32	Environmental	79	Rate of presence of anti-drift nozzles on sprayers inspected
M18M27,	Environmental	80	Rate of marketing of PPP dangerous for the aquatic environment
M18, M27	Environmental	81	Rate of marketing of [plant protection] products containing priority substances

M13, M27	Environmental	82	Rate of non-compliance with parametric values for pesticides in drinking water
M13, M18, M27	Environmental	83	Rate of non-compliance with safety requirements in applying plant protection products
M13, MI8, M27	Environmental	84	Rate of non-compliance with correct storage of plant protection products in the commercial channel
M17, M18, M29	Environmental	85	Quantity of PPP packaging waste collected/year (t.)
M29	Social	86	No of collection centres for empty PPP packaging
M29	Social	87	Quantity of PPP packaging placed on the market/year (t.)
M29	Environmental	88	Rate of collection of used PPP packaging waste
M29	Environmental	89	Rate of recycling/recovery of PPP packaging waste
M29	Social	90	Quantity of seed packaging placed on the market (t.)
M29	Social	91	Rate of take-up by companies of a seed packaging management system
M13, M30	Social	92	No of effluent management systems certified
M13, M30	Environmental	93	No of holdings taking up certified effluent management systems
M30, M31	Environmental	94	Quantity of residues of obsolete PPP collected (t.)
M32	Social	95	Rate of PPP application equipment inspected
M32	Social	96	Rate of approval of PPP application equipment inspected
M32	Social	97	No of PPP application equipment inspectors certified
M32	Social	98	No of CIPPs licensed

M32	Social	99	No of CIPPs/NUTS II region
M32	Social	100	No of inspections of new PPP application equipment
M32	Social	101	Rate of inspection of new PPP application equipment acquired after 15 October 2010
M32	Social	102	New PPP application equipment placed on the market (number)
M42	Environmental	103	No of auxiliary species recorded (cumulative)
M13 M18, M27	Environmental	104	Rate of use of PPP hazardous to birds and fauna
M13, M18, M27	Environmental	105	Quantity (kg) of PPP hazardous to birds and fauna used/Total quantity of PPP used x 100
M33	Social	106	No of holdings taking up sustainable management practices
M33, M34	Environmental	107	No of PPP hazardous to bees/Total number of PPP placed on the market
M33, M34	Environmental	108	No of recorded incidents with PPP affecting bees
M15, M33, M34	Social	109	Pesticide residues detected in honey
M33, M34	Environmental	110	Rate of use of seed drills with baffle plates
M2, M13, M35	Social	111	% of major crops with technical guides defined/revised for IPM
M2, M13, M35	Social	112	No of crops with technical guides defined/revised for IPM
M35, M36, M37	Social	113	Average number of crops x pests monitored by Agricultural Information Stations
M35, M36, M37	Social	114	No of farmers subscribing to the SNAA
M35, M36, M37	Social	115	No of farmers subscribing to the SAA
M16	Social	116	Date of availability of the authorised PPP information management system
M16	Social	117	% of users satisfied with PPP information

M9, M13, M38	Social	118	No of awareness-raising activities per region (NUTS II)
M36	Social	119	No of technicians recognised for providing IPM technical assistance
M38	Social	120	Rate of professional users in receipt of IPM technical assistance
M12, M18,	Social	121	% of non-compliances with the application of general IPM principles
M13, M39, M40	Social	122	No of technicians recognised under MPI [sic: PRODI/IP?] and OP
M13, M39, M40	Social	123	% of major crops with technical guides defined/revised for IP and OP
M39, M40, M43	Social	124	No of MPI [sic: PRODI/IP?] and OP demonstration farms
M41	Social	125	No of aims considered not covered and/or insufficiently covered/Total number of aims not covered
M43	Social	126	No of alternative solutions available (cumulative)
M41	Social	127	No of products and aims authorised on the basis of MR (cumulative)
M41	Social	128	No of products authorised on the basis of parallel trade (cumulative)
M44	Social	129	No of platforms set up or accessible
M44	Social	130	No of accesses to communication platforms
M44	Social	131	No of technical documents included on platform
M17, M45	Social	132	% of non-compliances due to the distribution and sale of illegal plant protection products
M17, M45	Social	133	No of prosecutions/No of establishments inspected
M17, M45	Social	134	No of establishments inspected
M17, M45	Social	135	No of prosecutions/No of vehicles carrying plant protection products

			inspected
M17, M47	Economic	136	% of packaging detected with illegal labels
M17, M46	Social	137	No of complaints brought
M17, M46	Social	138	No of prosecutions relating to the sale of PPP/No of unlicensed organisations inspected
M17, M46	Social	139	No of unlicensed organisations inspected
M17, M47	Social	140	% of packaging detected with illegal labels
M47	Social	141	No of packages inspected/year
M47	Social	142	No of samples not complying with authorisation granted/No of samples analysed under DGAV control
M47	Social	143	No of samples analysed under DGAV control
M17, M18	Social	144	% of packaging of illegal products collected by management systems

ANNEXES

Annex I – Action Records

M1 – Gather technical-scientific information on the components of integrated pest management in the country's various crop systems, the impacts of plant protection product use on human health and the environment, standardisable indicators and other information on the use of plant protection products		
Description	The aim is to use integrated pest management thematic platforms to reinforce communication between parties who hold relevant technical-scientific information and other specific information in order to ascertain the present state of knowledge in Portugal.	
Coordination	INIAV, I.P. and DGAV	
Implementation	**Timetable**	**Implementing bodies**
Reinforce communication between parties by means of IPM thematic platforms, the impacts of PPP on health and the environment and indicators of their sustainable use.	By end of 2015	National scientific and technological system organisations, DGAV, DGADR, DRAPs, GPP, ICNF, Farmers' and forestry producers' organisations, *Centros Operativos e Tecnológicos*
Set up a monitoring group under Article 48(4) of Law No 26/2013	By end of 2014	DGAV (coordinator), DRAPs, Farmers' and forestry producers' organisations, National scientific and technological system organisations, INIAV, I.P., DGS, APA, ICNF, INEM, ANIPLA and others on a voluntary basis.

M2 – Support the inclusion of knowledge in the technical guides for sustainable production methods and identify gaps in knowledge to guide future research		
Description	The aim is to support the inclusion of knowledge already available but not yet considered in technical guides on existing sustainable production methods or others which are created and simultaneously identify new research areas.	
Coordination	INIAV, I.P.	
Implementation	**Timetable**	**Implementing bodies**
Set up theme-based groups around the components of IPM: risk estimation and decision making and alternatives to chemical means of protection.	By end of 2015	National scientific and technological system organisations, DRAPs, DGADR, GPP, ICNF, Farmers' and forestry producers' organisations, *Centros Operativos e Tecnológicos*

M3 – Foster operational networks proposing thematic research and innovation priorities		
Description	The aim is to foster the creation of operational networks whose members can form partnerships to submit RTD projects to available sources of funding	
Coordination	INIAV, I.P.	
Implementation	**Timetable**	**Implementing bodies**
Identify priority research and technology transfer themes for RTD project proposals.	During validity of the NAP	National scientific and technological system organisations, European research organisations Farmers' and forestry producers' organisations, DGAV, DRAPs, GPP, ICNF, *Centros Operativos e Tecnológicos*.
Establish contacts with national scientific and technology system research groups and other European groups, particularly from 'Mediterranean Europe', as well as production companies and associations so as to organise research and innovation proposals to be submitted for national and European funding.	During validity of the NAP according to the availability of funding	National scientific and technological system organisations, European research organisations Farmers' and forestry producers' organisations, DGAV, DRAPs, GPP, *Centros Operativos e Tecnológicos*
Raise decision-making bodies' awareness of research funding policy measures, particularly the establishment of programme contracts and national participation in European activities provided for in The CAP towards 2010.	During 2013	National scientific and technological system organisations, European research organisations Farmers' and forestry producers' organisations, DGAV, GPP, *Centros Operativos e Tecnológicos*.

M4 – Foster operational networks proposing demonstration activities under integrated pest management and the sustainable use of plant protection products		
Description	The aim is to set up operational networks whose members, in coordination with activities to be developed under Cross-cutting axis 2 – Training, awareness-raising and information, can take part in demonstration activities concerning integrated pest management and the sustainable use of plant protection products and form partnerships to submit proposals for action to available sources of funding.	
Coordination	DGAV, DGADR	
Implementation	**Timetable**	**Implementing bodies**
Identify priority demonstration and technology transfer themes, i.e.: (1) integrated pest management components: indirect means of protection, risk estimation, decision-making rules and means of protection; (2) use of models to forecast the risk of pest damage; (3) alternatives to plant protection products, particularly cultural, organic and biotechnical; (4) best practice in the storage and application of plant protection products on the holding; (5) economic and environmental contribution of integrated pest management and the sustainable use of plant protection products	During validity of the NAP	National scientific and technological system organisations, Farmers' and forestry producers' organisations, DRAPs, ICNF, *Centros Operativos e Tecnológicos*

M5 – Define and/or keep training standards on the sustainable use of plant protection products up to date and promote training provision		
Description	The aim is to create the conditions required to provide the mandatory training established under Law No 26/2013 and to promote such provision	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Keep the content of training activities up to date and update DCAPF [PPPDMA] and DCPF [PPPDM] course content in accordance with Annex IV of Law No 26/2013	During validity of the NAP	DRAPs, DGADR, INIAV, Certified training organisations, Higher Education Institutions
Keep the content of training activities up to date and update APF [PPPA] course content in accordance with Annex IV of Law No 26/2013	During validity of the NAP	DRAPs, DGADR, INIAV, Certified training organisations
Keep the content of training activities for application equipment inspection up to date	During validity of the NAP	DRAPs, DGADR, INIAV, Certified training organisations
Define the requirements and content of aerial agricultural operator training activities in accordance with Annex IV of Law No 26/2013 and INAC requirements	During validity of the NAP	DGAV, INAC
Produce training content for the ASAE, DRAPs and competent police authorities	By end of 2013	DGAV
Define the requirements and conditions of provision and assessment of the knowledge test provided for under Law No 26/2013	By end of 2014	DGAV, DRAPs
Keep IPM, IP and OP training standards for	During validity of the NAP	DGADR, DGAV, DRAPs, INIAV I.P.

technicians and farmers up to date		
Keep the content of training activities for specialist operators up to date	During validity of the NAP	DGAV
Streamline the professional user qualification process	During validity of the NAP	DGAV, DGADR, DRAPs
Define criteria for renewing the qualification of all professional users	By end of 2014	DGAV, DRAPs
Promote updating at CIPP level of qualified inspectors	During validity of the NAP	DGAV, DRAPs, CIPP
Promote the qualification, renewal of qualification and certification of aerial agricultural operators	During validity of the NAP	INAC, DGAV

M6 – Define and create a reserve of trainers and training quality assessment criteria		
Description	The aim is to provide training organisations with certified trainers who meet the necessary requirements and to establish criteria for assessing the quality of training delivered.	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Identify the availability and distribution of trainers at regional level	By end of 2014	DGAV, DRAPs, Certified training organisations
Define requirements for registration in the reserve and renewal of registration	By end of 2014	DGAV, DRAPs
Register trainers in the reserve	During validity of the NAP	DGAV, DRAPs
Define training quality assessment requirements	During validity of the NAP	DGAV, DRAPs

M7 – Promote the funding of the mandatory training activities provided for under Law No 26/2013 of 11 April 2013		
Description	The aim is to draw up a proposal to ensure continuity of funding for the mandatory training provided for under Law No 26/2013.	
Coordination	DGAV, DGADR	
Implementation	**Timetable**	**Implementing bodies**
Survey measures for providing support and financial incentives for training	During validity of the NAP	DGAV, GPP, DRAPs
Draw up a proposal for funding training activities	During validity of the NAP	DGAV, GPP, DRAPs

M8 – Promote communication between private training organisations, farmers' [and forestry producers'] organisations and the administration to identify training needs		
Description	The aim is to ensure that all the parties involved receive timely information on matters relating to training in the sustainable use of plant protection products and to identify training needs rapidly	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Establish an inter- and intra-institutional network which is also linked to other bodies on training needs in the sustainable use of plant protection products	By end of 2014	DGAV, DRAPs, DGADR, Farmers' and forestry producers' organisations, Certified training organisations, Higher Education Institutions
Set up a registration platform for training purposes	By end of 2014	DGAV, DRAPs

M9 – Promote training for the control bodies provided for under Law No 26/2013		
Description	The aim is to ensure that control bodies acquire plant protection product expertise to make them more effective and efficient	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Promote training for ASAE inspectors	During validity of the NAP	DGAV, ASAE
Promote training for the APA, DRAPs and competent police authorities	During validity of the NAP	DGAV, APA, DRAPs, police authorities
Establish a training protocol with the GNR on PPP trade and distribution	During validity of the NAP	DGAV, GNR

M10 – Foster b-learning training provision		
Description	The aim is to establish conditions to foster distance learning provision, taking trainees' work commitments into account	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Define training content	By end of 2014	DGADR, DRAPs, INIAV, Certified training organisations, Higher Education Institutions
Set up an e-platform	During validity of the NAP	DGAV, DRAPs

M11 – Promote the dissemination of good practice in the handling, storage and application of plant protection products by non-professional users		
Description	The aim is to foster awareness-raising and increase non-professional users' understanding of the safe use of plant protection products	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Provide leaflets on the public's right to information to sales outlets supplying products for non-professional use	By end of 2014	DGAV, DRAPs, APED, GROQUIFAR
Establish protocols with local authorities to raise the awareness of non-professional users	During validity of the NAP	DGAV, local authorities

M12 – Carry out and promote awareness-raising activities for professional users to ensure compliance with appropriate risk reduction measures in applying plant protection products and adopting integrated pest management principles		
Description	The aim is to foster awareness-raising and increase professional users' understanding of the provisions of Law No 26/2013 on the application of plant protection products in various areas	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Establish partnerships with DRAPs, farmers' and forestry producers' organisations and industry to carry out awareness-raising activities on risk reduction measures in applications on agricultural and forestry holdings	During validity of the NAP	DGAV, DRAPs, Farmers' and forestry producers' organisations, ANIPLA
Establish protocols with local authorities to raise the awareness of providers of land-based application services in urban and recreational areas and communication routes	During validity of the NAP	DGAV, DRAPs, local authorities
Establish partnerships with DRAPs, farmers' organisations and the INAC to carry out awareness-raising activities on the aerial application of PPP	During validity of the NAP	DGAV, DRAPs, INAC, Farmers' and forestry producers' organisations
Establish partnerships with DRAPs, farmers' organisations and industry to carry out awareness-raising activities on the adoption of IPM principles	During validity of the NAP	DGAV, DRAPs, ANIPLA, Farmers' and forestry producers' organisations
Carry out awareness-raising activities on the existence of systems for collecting and managing plant protection product packaging waste	During validity of the NAP	VALORFITO/SIGERU

M13 – Promote the dissemination of good practice in the handling, storage and application of plant protection products by professional users		
Description	The aim is to foster the provision of information to professional users through guidelines and the dissemination of good practice in commercial channels and the application of plant protection products	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Update and disseminate the code of conduct on plant protection product distribution and sales channels	By end of 2014	DGAV
Publish and disseminate the code of conduct on the application of plant protection products	By end of 2014	DGAV, ICNF
Continue projects (‘Cultivar a Segurança’, ‘Família Prudêncio’)	During validity of the NAP	ANIPLA, VALORFITO
Promote the official publication of newsletters, leaflets, reports and statistics on the marketing and use of plant protection products	During validity of the NAP	DGAV, DRAPs
Disseminate the Guide to Procedures for recognising CIPPs	During validity of the NAP	DGAV
Disseminate a technical manual for drawing up aerial application plans	By January 2014	DGAV
Update and disseminate technical information documents for adopting general IPM principles	During validity of the NAP	DGAV, DRAPs, INIAV, ICNF, ANIPLA, Farmers’ and forestry producers’ organisations, Higher Education Institutions
Promote the updating and provision of IP and OP technical guides	During validity of the NAP	DGADR, DGAV
Disseminate information on alternatives to chemical	During validity of the NAP	DGAV, DRAPs, INIAV, ANIPLA, Farmers’ and forestry producers’

means of protection		organisations, Higher Education Institutions
Disseminate active communication platforms and promote their use	During validity of the NAP	DGAV
Ensure the dissemination of authorisations, cancellations and alterations to authorisations granted to plant protection products	During validity of the NAP	DGAV
Formulate and disseminate procedure manuals for PPP inspection and control	During validity of the NAP	Control Authorities
Draw up and maintain FAQs on official websites	During validity of the NAP	DGAV, DRAPs
Run workshops for trainers on the sustainable use of plant protection products	During validity of the NAP	DGAV, DGADR, Certified training organisations
Disseminate Law No 26/2013 and the various aspects of the Action Plan	During validity of the NAP	DGAV, DRAPs, INIAV, IFAP, ANIPLA, Farmers' and forestry producers' organisations, Higher Education Institutions

M14 – Collect information on the use of plant protection products		
Description	The aim is to obtain data with which to assess the agricultural practices followed, compliance with risk mitigation measures and the degree of adoption of general IPM principles	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Conduct surveys in sales outlets for products for professional use and in training activities to assess the most common agricultural practices	During validity of the NAP	DGAV, DRAPs, GROQUIFAR, Certified training organisations
Conduct surveys to collect information from farmers on the effective application of risk mitigation measures	During validity of the NAP	DGAV, DRAPs
Conduct surveys to collect information from farmers on the application of general IPM principles	During validity of the NAP	DGAV, DRAPs

M15 – Monitor and control food of plant and animal origin		
Description	The aim is to reinforce the monitoring and control of food of plant and animal origin which enters the commercial channel	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Establish the number of samples of plant and animal origin in the official pesticide residue control plan	By end of 4th quarter of preceding year	DGAV
Establish the number of foods of plant and animal origin sampled under the official pesticide residue control plan	By end of 4th quarter of preceding year	DGAV
Establish the number of residues tested in food of plant and animal origin sampled under the official pesticide residue control plan	By end of 4th quarter of preceding year	DGAV
Implement the official pesticide residue control plan	During validity of the plan	ASAE, Network of pesticide residue laboratories
Draw up an annual report	By end of 2nd quarter of preceding year	DGAV, Network of pesticide residue laboratories

M16 – Detailed timely dissemination of authorised uses		
Description	The aim is to ensure that professional users and the general public have full timely knowledge of all plant protection products and the respective authorised uses.	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Set up a technological information and communication system to disseminate authorisations granted, amended and withdrawn	By end of 2014	DGAV
Conduct a satisfaction survey of users of plant protection product information	Biannual from 2015	DGAV

M17 – Monitoring and control of plant protection product distribution, sale and storage		
Description	The aim is to reinforce the monitoring and control of plant protection products in commercial channels and storage facilities supporting their application.	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Monitor economic activity relating to the distribution and sale of plant protection products	During validity of the plan	ASAE
Draw up and communicate an annual monitoring report to the DGAV	By end of 1st quarter of following year	ASAE
Monitor distribution companies and authorised sales outlets	During validity of the plan	DGAV, DRAPs
Draw up an annual report	By end of 1st quarter of following year	DGAV, DRAPs
Monitor and control facilities on agricultural or forestry holdings	During validity of the plan	DRAPs
Draw up and communicate an annual monitoring report to the DGAV	By end of 1st quarter of following year	DRAPs, IFAP

M18 – Monitoring and control of the land-based application of plant protection products		
Description	The aim is to reinforce the monitoring and control of the land-based application of plant protection products	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Monitor the application of plant protection products on agricultural and forestry holdings	During validity of the plan	DRAPs
Draw up and communicate an annual report to the DGAV	By end of 1st quarter of following year	IFAP, DRAPs
Monitor the application of plant protection products in urban and recreational areas and communication routes	During validity of the plan	DRAPs, competent police authorities
Monitor application service providers	During validity of the plan	DGAV, DRAPs
Monitor the application of plant protection products on agricultural and forestry holdings	During validity of the plan	DRAPs, IFAP

M19 – Authorisation to engage in activity		
Description	The aim is to ensure the operation of the system for authorising distribution companies, sales outlets and land-based application service providers	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Visits to provide advice and examine facilities during the authorisation procedure	During validity of the plan	DRAPs
Authorisation of distribution and sales activities	Statutory time limits	DGAV, DRAPs
Authorisation of land-based applications	Statutory time limits	DGAV, DRAPs

M20 – Inspection of plant protection product application equipment		
Description	The aim is to ensure the implementation and operation of the system for inspecting plant protection product application equipment	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Set up a database to record the application equipment inspected	By end of 2014	DRAPs
License CIPPs	During validity of the plan	DGAV
Update CIPP inspection manual requirements	During validity of the plan	DGAV
Inspect application equipment	During validity of the plan	CIPP
Monitor application equipment subject to mandatory inspection	During validity of the plan	DRAPs, competent police authorities
Check existence of anti-drift nozzles during inspection of land-based application equipment	During validity of the plan	CIPP
Send an annual report on % of anti-drift nozzles checked to DGAV	By end of 1st quarter of following year	CIPP

M21 – Promote the use of PPE		
Description	The aim is to encourage the use of and resulting demand for personal protective equipment (PPE) on the market	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Raise awareness of the need to use PPE	During validity of the plan	DGAV, DRAPs, Farmers' and forestry producers' organisations, ANIPLA
Conduct surveys on the use of PPE	During validity of the plan	Distribution and sales authorisation holders (sales outlets), sales authorisation holders, DGAV

M22 – Monitoring and control of the aerial application of plant protection products		
Description	The aim is to enhance monitoring and control of the aerial application of plant protection products	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Control the aerial application of plant protection products on agricultural and forestry holdings	During validity of the plan	INAC, DRAPs, competent police authorities
Draw up and communicate an annual report to the DGAV	By end of 1st quarter of following year	INAC, DRAPs
Monitor the aerial application of plant protection products on agricultural and forestry holdings	During validity of the plan	INAC, DRAPs

M23 – Certification of aerial application service providers		
Description	The aim is to ensure the operation of the system for authorising PPP aerial application service providers	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Certification of aerial applications	During validity of the plan	INAC

M24 – Authorisation of aerial application plans		
Description	The aim is to ensure the operation of the system for authorising aerial application plans	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Authorisation of aerial application plans	During validity of the plan	DGAV, DRAPs, APA, ICNF
Annual definition of crops, locations and special aerial application requirements	During validity of the plan	DGAV, DRAPs

M25 – Promotion of risk mitigation measures		
Description	The aim is to encourage the use of techniques to minimise spray and dust drift	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Awareness-raising on the use of techniques to minimise spray and dust drift	During validity of the plan	DGAV

M26 – Collection of statistics on incidents involving plant protection products		
Description	The aim is to record the number of incidents involving plant protection products on an annual basis	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Record incidents	During validity of the plan	INEM/CIAV
Draw up and communicate an annual report to the DGAV	By end of 1st quarter of following year	INEM/CIAV

M27 – Reinforce good practice in the application of plant protection products		
Description	The aim is to ensure that action is taken to safeguard water resources when plant protection products are used	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Include awareness-raising and the provision of advice on risk mitigation measures and practices (alert or safety phrase) on the use of plant protection products and the protection of water bodies in codes of conduct	1 January 2014	DGAV, training organisations, DGADR
Establish partnerships with model farms and farmers' associations to promote and disseminate good practice	During validity of the NAP	ANIPLA, INIAV, Higher Education, DGAV, DRAPs

M28 – Implement an aerial application authorisation and recording system [sic]		
Description	The aim is to ensure the application of the legal framework for aerial applications by introducing structures and guidelines enabling the system for authorising aerial application plans to operate.	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Survey and organise information on areas, crops and plant protection products used in aerial applications	1 January 2014	DGAV, DRAPs, INAC, ICNF
Define crops, locations and special aerial application requirements	1 January 2014	DGAV, DRAPs, CAP, CONFAGRI
Draw up technical guidelines for the aerial application plan	1 January 2014	DGAV, DRAPs, APA, ICNF (others)
Define contact points and establish the regional and central network for giving notice of aerial applications and authorising the aerial application plan (establishment of an official network for controlling aerial applications)	1 January 2014	DGAV, DRAPs, APA, ICNF (others)

M29 – Reinforce the system for collecting and managing plant protection product packaging waste		
Description	The aim is to increase current levels of treatment and collection of empty plant protection product packaging to reduce its impact on the environment in general and on contamination of water resources in particular	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Publish and disseminate good packaging waste management practice in the code of conduct for applying plant protection products	1 January 2014	DGAV, DRAPs, DGADR
Revise the legal framework governing packaging waste management (DL 187/2006) to include primary seed packaging	During validity of the NAP	DGAV, APA
Include the collection of treated seed packaging in packaging waste management	1 January 2014	APA
Increase the number of packaging waste collection centres	During validity of the NAP	Licensed waste management systems

M30 – Promote good practice in managing plant protection product residues		
Description	The aim is to ensure that professional users adopt correct practices for managing residues and effluents from preparing mixtures and cleaning equipment to ensure greater environmental and natural resources protection	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Prepare regulations for certifying effluent collection and management systems	During validity of the NAP	DGAV, ANIPLA, APA
Propose positive discrimination methods in the context of the next CSF	During validity of the NAP	GPP, DGAV
Include guidelines on the correct preparation of mixtures and cleaning of equipment in the code of conduct	1 January 2014	DGAV

M31 – Promote proper management and disposal of plant protection product residues		
Description	The aim is to put the systematic collection of residues of obsolete plant protection products into operation	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Survey stocks of residues of obsolete plant protection products at user level	During validity of the NAP	DRAPs, DGAV
Draw up a proposal for disposing of residues of obsolete PPP	During validity of the NAP	ANIPLA, GROQUIFAR, CAP, CNA, CONFAGRI, AJAP, DGAV, APA

M32 – Implementation of the system for inspecting plant protection product application equipment		
Description	The aim is to ensure that the system for inspecting plant protection product application equipment is effectively implemented and that equipment is effectively inspected, ensuring compliance with the necessary requirements.	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Publication of supplementary legislation (fees and stamp) for inspecting equipment	By end of 2013	DGAV/MAMAOT
Creation of a database for recording application equipment inspected	2nd quarter 2013	DGAV
Licensing of CIPPs	During validity of the NAP	DGAV
Identification/census of all application equipment to be inspected (new and in use)	During validity of the NAP	DGAV, DRAPs, INE
Dissemination of a manual for recognising application equipment inspection centres	During validity of the NAP	DGAV
Definition of inspection manual requirements	During validity of the NAP	DGAV
Monitoring of application equipment subject to mandatory inspection	During validity of the NAP	DRAPs, competent police authorities

M33 – Promote sustainable biodiversity management (on agricultural and forestry holdings and in urban and recreational areas and communication routes)		
Description	The aim is to raise professional users' awareness of the need to adopt practices fostering the protection of beneficial organisms in particular and biodiversity in general, and which also contribute to agricultural and forestry activity	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
National framework for information on biodiversity indicators on agricultural and forestry holdings	During validity of the NAP	Higher Education, ANIPLA, ICNF, INIAV IP
Adoption of criteria regarding the quality of seeds treated with PPP	During validity of the NAP	ANSEME, ANPROMIS, ANIPLA, GROQUIFAR, DGAV
Promotion of the monitoring of seed drilling equipment as regards the use of baffle plates	During validity of the NAP	DRAPs

M34 – Monitoring of the effects and risks of plant protection products on bees		
Description	The aim is to increase knowledge on the effects of plant protection products on pollinators and to put communication of the risks of plant protection products on bees into operation in accordance with legal regulations	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Propose the inclusion in the National Bee Health Plan of measures to monitor the effects of PPP on bees	During validity of the NAP	DGAV, FNAP
Promote communication of the risks of plant protection products on bees and other pollinators	During validity of the NAP	DGAV, DRAPs, INIAV, FNAP

M35 – Provision of technical information to all professional users		
Description	Provision of technical information to all professional users to ensure compliance with integrated pest management principles	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Setting up of workgroups per crop or groups of crop to draw up technical guides	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions, ICNF
Collection and compiling of all available crop protection information	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions, ICNF
Dissemination of available crop protection information	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions, ICNF
Organisation and provision of existing information on alternative means of protection	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions, ICNF

M36 – Dissemination of information and decision-making tools by SNAA		
Description	Increase the percentage of agricultural territory covered by SNAA information	
Coordination	DGAV/DRAPs	
Implementation	**Timetable**	**Implementing bodies**
Identification of public and private organisations that currently disseminate information supporting decision making	By end of 2014	DGAV, Farmers' organisations, DRAPs
Establishment of criteria for private organisations to join the SNAA	By end of 2014	DGAV, DRAPs
Inclusion of private organisations in the SNAA	During validity of the NAP	DGAV, DRAPs
Assurance that Agricultural Information Stations issue information in accordance with integrated pest management principles	During validity of the NAP	DGAV, DRAPs

M37 – Dissemination of information and decision-making tools by SAA		
Description	Increase the percentage of agricultural territory covered by SAA information	
Coordination	Farmers' confederations	
Implementation	**Timetable**	**Implementing bodies**
Identification of farmers' organisations that currently disseminate information supporting decision making	By end of 2014	CAP, CNA, CONFAGRI, AJAP

M38 – Promote technical support for integrated pest management		
Description	Provide professional users with the technical knowledge required for responsible decision making	
Coordination	DGAV/DGADR	
Implementation	**Timetable**	**Implementing bodies**
Recognition of technicians for providing technical assistance on IPM	During validity of the NAP	DGADR
Identification of technicians recognised for providing technical assistance on IPM	During validity of the NAP	DGADR
Awareness-raising on IPM	During validity of the NAP	DGAV, DGADR, ANIPLA, Farmers' organisations, DRAPs, Centros Operativos

M39 – Promote technical support for organic and integrated production		
Description	Provide professional users with the technical knowledge required for responsible decision making	
Coordination	DGAV/DGADR	
Implementation	**Timetable**	**Implementing bodies**
Recognition of technicians for providing IP and OP technical assistance	During validity of the NAP	DGADR
Identification of technicians recognised for providing IP and OP technical assistance	During validity of the NAP	DGADR
Awareness-raising on IP	During validity of the NAP	DGAV, DGADR, ANIPLA, Farmers' organisations, DRAPs, Centros Operativos

M40 – Provision of IP and OP technical standards		
Description	Provide professional users with technical information to ensure compliance with production standards	
Coordination	DGAV/DGADR	
Implementation	**Timetable**	**Implementing bodies**
Setting up of workgroups per crop or groups of crops to draw up technical standards	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions
Collection and compilation of all available crop production system information	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions
Dissemination of available information on MPI [sic: PRODI/IP?] and OP	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions
Establishment of demonstration fields	During validity of the NAP	DGAV, DRAPs, DGADR, CAP, CONFAGRI, CNA, AJAP, ANIPLA, INIAV, Higher Education Institutions

M41 – Foster new solutions		
Description	Secure sufficient crop protection means to ensure equal competition	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Make fewer applications for use for aims not covered	During validity of the NAP	DRAPs, Farmers' and forestry producers' organisations
Foster applications for mutual recognition	During validity of the NAP	Plant protection product industry
Foster sales authorisation applications in the national interest	During validity of the NAP	DGAV, plant protection product industry

M42 – Implement the recording of auxiliary species [sic]		
Description	Create conditions for the sustainable use of auxiliary species	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Definition of the legal framework	By end of 2014	ICNF, DGAV, INIAV, DRAPs, Farmers' and forestry producers' organisations
Implementation of the record system	By end of 2014	ICNF, DGAV, INIAV

M43 – Foster the use of alternative practices and techniques		
Description	Reduce dependency on chemical means of protection by means of all the techniques and practices to be used in managing agricultural and forestry holdings that contribute directly or indirectly to that end	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Identification of organisations that disseminate technical information	During validity of the NAP	DGAV, DGADR, Farmers' and forestry producers' organisations, DRAPs
Provision of technical information	During validity of the NAP	DGAV, DGADR, Higher Education Institutions, Agricultural Occupational qualifications, Farmers' and forestry producers' organisations, INIAV, DRAPs
Establishment and/or maintenance of demonstration plots to promote the dissemination of good IPM practice	During validity of the NAP	Higher Education Institutions, Agricultural Occupational qualifications, Centros Operativos, INIAV, Farmers' organisations, DRAPs

M44 – Adapt and manage communication platforms		
Description	Establish a communications interface to foster communication between the parties involved	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Identify existing platforms and their roles	During validity of the NAP	All organisations with integrated pest management platforms
Develop platforms	During validity of the NAP	All organisations with integrated pest management platforms

M45 – Reinforce the monitoring of plant protection product transport		
Description	The aim is to reinforce the monitoring and control of the entry and movement of illegal plant protection products throughout national territory	
Coordination	Competent police authorities	
Implementation	**Timetable**	**Implementing bodies**
Ensure coordinated monitoring and control of the transport of illegal plant protection products on a systematic basis	During validity of the NAP	Competent police authorities

M46 – Reinforce the monitoring of distribution and sales in unlicensed outlets		
Description	The aim is to reinforce the monitoring and control of distribution and sales in unlicensed outlets throughout national territory	
Coordination	ASAE	
Implementation	**Timetable**	**Implementing bodies**
Ensure coordinated monitoring and control of distribution and sales in unlicensed outlets	During validity of the NAP	ASAE, competent police authorities

M47 – Monitoring and control of labelling, packaging and the respective formulations		
Description	The aim is to reinforce the monitoring and control of plant protection products on the market	
Coordination	DGAV	
Implementation	**Timetable**	**Implementing bodies**
Define the control plan	Annual	DGAV
Implement the plan and draw up the respective report	Annual	DGAV

Annex II - Technical Team

This National Action Plan has been drawn up in the context of the implementation of Directive 2009/128/EC, supplementing Law No 26/2013, which transposes Directive 128 into national law. A workgroup made up of various public and private organisations and recognised individual crop protection organisations was appointed for this purpose by Order No 13879/2012 of 25 October 2012 (Annex IV).

The technical team coordinating or moderating the different areas in the National Action Plan for the Sustainable Use of Plant Protection Products is as follows:

Project technical coordination		Flávia Alfarroba
Executive support		Alice Leitão
Sectoral teams		
Cross-cutting axis 1 – Research, innovation and technology transfer	**Moderation**	Fátima Calouro
		António Mexia
		Joana Godinho
		Maria do Céu Godinho
Cross-cutting axis 2 – Training, awareness-raising and information	**Moderation**	Alice Leitão
		Ana Bárbara Oliveira
		Paula Mourão
		Ricardo Gomes
Strategic axis 1 – Protection of human health	**Moderation**	Helena Ponte
		Bento Carvalho
		Paula Mourão
Strategic axis 2 – Environmental protection	**Moderation**	Ana Barbara Oliveira
Strategic axis 3 – Promotion of sustainable agricultural and forestry production systems	**Moderation**	Miriam Cavaco
		Felisbela Mendes

Annex III – Representatives of the Workgroup's various organisations for drawing up the National Action Plan for the Sustainable Use of Plant Protection Products

Organisation	Representative
DGAV	Flavia Alfarroba
	Helena Ponte
	Miriam Cavaco
	Ana Bárbara Oliveira
	Alice Leitão
	Bento Carvalho
	Felisbela Mendes
	Paula Mourão
GPP	Ana Antunes
	Lara Coelho
DGADR	Margarida Âmbar
	Nicolau Galhardo
DGRM	Edgar Afonso
DRAPs Norte	Mana Manuel Mesquita
	Teotónio Castro
	Miguel Rebelo
	lida Ramadas
DRAPs Centro	Helena Cortez
	Vanda Batista
DRAPLVT	Ana Arsénio
	Rui Mendonça
DRAPs Alentejo	Isabel Mota
DRAPs Algarve	José Entrudo Fernandes

	Celestino Soares
IFAP, I.P.	Laura Gonçalves
	Maria João Rosa
	Maria José Chora
	Lurdes Nascimento
	Sofia Moniz
ICNF, I.P.	Gioconda Silva
APA, I.P.	Jorge Garcia
INIAV, I.P.	Fátima Calouro
INE. I.P.	Sofia Duarte
ASAE	Lubélia Silva
INAC, I.P.	Carlos Gomes
	Renato Miranda
DGS	Cesaltina Ramos
INEM, I.P.	Fátima Rato
DRADR Azores	Carlos Santos
	João Gouveia
	Adriano Mota
DRADR Madeira	Paulo Santos
	Paula Jardim
CAP	Jorge Azevedo
CNA	João Filipe
	Cláudia Filipe
	Vanda Silva
CONFAGRI	David Jorge
AJAP	Nelson Figueira

	Valentina Carvalho
CNJ	António Gadanho
	Carlos Franco
FNAASPPI	José Dinis Assunção
FNAP	Joana Godinho
ANIPLA	Mónica Teixeira
	Paulo Lourenço
	João Barreto
	Josué Clemente
	Paulo Cruz
GROQUIFAR	Miguel Reis
	Catarina Carvalho
Representatives on their own behalf	Antônio Mexia
	Maria do Céu Godinho

Annex IV – Organisations participating in the Workgroup for drawing up the National Action Plan for the Sustainable Use of Plant Protection Products

Direção-Geral de Alimentação e Veterinária (DGAV) [Directorate General for Food and Veterinary Affairs], chair and coordinator

Gabinete de Planeamento e Políticas (GPP) [Planning and Policy Bureau]

Direção-Geral de Agricultura e Desenvolvimento Rural (DGADR) [Directorate General for Agriculture and Rural Development]

Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos (DGRM) [Directorate General for Natural Resources and Maritime Safety and Services]

Direção Regional de Agricultura e Pescas do Norte (DRAP Norte) [Regional Directorate for Agriculture and Fisheries (North)]

Direção Regional de Agricultura e Pescas do Centro (DRAP Centro)

Direção Regional de Agricultura e Pescas de Lisboa e Vale do Tejo (DRAPLVT)

Direção Regional de Agricultura e Pescas do Alentejo (DRAP Alentejo)

Direção Regional de Agricultura e Pescas do Algarve (DRAP Algarve)

Instituto de Financiamento da Agricultura e Pescas, I.P. (IFAP) [Agricultural and Fisheries Financing Institute]

Instituto de Conservação da Natureza e das Florestas, I.P. (ICNF) [Institute for the Conservation of Nature and Forests]

Agência Portuguesa do Ambiente, I.P. (APA) [Portuguese Environment Agency]

Instituto Nacional de Investigação Agrária e Veterinária, I.P. (INIAV) [National Agricultural and Veterinary Research Institute]

Instituto Nacional de Estatística, I.P. (INE) [National Statistics Institute]

Autoridade de Segurança Alimentar e Econômica (ASAE) [Food Safety and Economic Security Authority]

Instituto Nacional de Aviação Civil, I.P. (INAC) [National Institute of Civil Aviation]

Direção-Geral de Saúde (DGS) [Directorate General for Health]

Instituto Nacional de Emergência Médica, I.P. (INEM) [National Emergency Medical Institute]

Direção Regional de Agricultura e Desenvolvimento Rural (DRADR-Região Autônoma dos Açores) [Regional Directorate for Agriculture and Rural Development – Azores]

Direção Regional de Agricultura e Desenvolvimento Rural (DRADR-Região Autônoma da Madeira)

Confederação dos Agricultores de Portugal (CAP) [Portuguese Farmers' Confederation]

Confederação Nacional da Agricultura (CNA) [National Agricultural Confederation]

Confederação das Cooperativas Agrícolas e do Crédito Agrícola de Portugal, C. C. R. L (CONFAGRI) [Portuguese Confederation of Agricultural Cooperatives and Agricultural Credit]

Associação dos Jovens Agricultores de Portugal (AJAP) [Portuguese Young Farmers' Association]

Confederação Nacional dos Jovens Agricultores e do Desenvolvimento Rural (CNJ) [National Young Farmers and Rural Development Confederation]

Federação Nacional das Associações de Agricultura Sustentável, de Proteção Integrada e Produção Integrada (FNAASPPI) [National Federation of Sustainable Agriculture, Integrated Pest Management and Integrated Production Associations]

Federação Nacional dos Apicultores de Portugal (FNAP) [National Federation of Portuguese Beekeepers]

Associação Nacional da Indústria para a Proteção das Plantas (ANIPLA) [National Association for the Plant Protection Industry]

Associação de Grossistas de Produtos Químicos e Farmacêuticos (GROQUIFAR) [Chemical and Pharmaceutical Product Wholesalers' Association]

Antônio Maria Marques Mexia
Maria do Céu Costa Godinho

Annex V - Competent bodies

Coordinating Organisations under the NAP

Direção-Geral de Alimentação e Veterinária (DGAV)

Direçâo-Geral de Agricultura e Desenvolvimento Rural (DGADR)

Gabinete de Planeamento e Políticas (GPP)

Instituto Nacional de Investigação Agrária e Veterinária, I.P. (INIAV-I.P.)

Instituto Nacional de Aviação Civil (INAC)

Instituto Nacional de Emergência Médica (INEM) / Centro de Informação Antivenenos (CIAV) [Poison Centre]

Direções Regionais de Agricultura e Pescas

Implementing organisations under the NAP

Direção-Geral de Veterinária (DGAV)

Direção-Geral de Agricultura e Desenvolvimento Rural (DGADR)

Gabinete de Planeamento e Políticas (GPP)

Agência Portuguesa do Ambiente, I.P. (APA)

Associação Nacional dos Produtores e Comerciantes de Sementes (ANSEME) [National Association of Seed Producers and Traders]

Associação Nacional dos Produtores de Milho e Sorgo (ANPROMIS) [National Association of Maize and Sorghum Producers]

Associação Portuguesa das Empresas de Distribuição (APED) [Portuguese Distributors' Association]

Associação Nacional da Industria para a Proteção das Plantas (ANIPLA)

Associação dos Jovens Agricultores de Portugal (AJAP)

Autoridade de Segurança Alimentar e Econômica (ASAE)

Associação de Grossistas de Produtos Químicos e Farmacêuticos (GROQUIFAR)

Centros de Inspeção Periódica obrigatória de equipamentos de aplicação de Produtos fitofarmacèuticos (CIPP)

Confederação dos Agricultores de Portugal (CAP)

Confederação Nacional das Cooperativas Agrícolas e do Crédito Agrícola de Portugal, CCRL (CONFAGRI)

Confederação Nacional dos Agricultores [sic] (CNA)

Entidade Reguladora de Serviços de Águas e Resíduos (ERSAR)

Federação Nacional das Associações de Agricultura Sustentável, de Proteção Integrada e Produção integrada (FNAASPPI)

Federação Nacional dos Apicultores de Portugal (FNAP)

Instituto de Financiamento da Agricultura e Pescas, I.P. (IFAP)

Instituto Nacional de Estatística (INE)

Inspeção Regional das Atividades Económicas dos Açores (IRAE Açores) [Regional Economic Activities Inspectorate (Azores)]

Inspeção Regional das Atividades Econômicas da Madeira (IRAE Madeira)

Instituto Nacional de Aviação Civil (INAC)

Instituto de Conservação da Natureza e das Florestas, I.P. (ICNF)

Direções Regionais de Agricultura e Pescas

Direção-Geral de Saúde (DGS)

Instituto Nacional de Emergência Médica (INEM) / Centro de Informação Antivenenos (CIAV)

Guarda Nacional Republicana (GNR)/Serviço de Proteção da Natureza e do Ambiente (SEPNA)

Annex VI: Glossary

EFSA – European Food Safety Authority

APF – Aplicação de Produtos Fitofarmacêuticos [Plant Protection Product Application – PPPA] (Course)

CIPP – Centro de Inspeção Periòdica obrigatória de equipamentos de aplicação de Produtos fitofarmacêuticos [Centre for the Mandatory Periodic Inspection of plant protection product application equipment]

DCAPF – Distribuição, Comercialização e Aplicação de Produtos Fitofarmacêuticos [Plant Protection Product Distribution, Marketing and Application – PPPDMA] (Course)

DCPF – Distribuição e Comercialização de Produtos Fitofarmacêuticos [Plant Protection Product Distribution and Marketing – PPPDM] (Course)

PPE – Personal Protective Equipment

ERSAR – Entidade Reguladora de Sistemas de Águas e Residuos [Waste Disposal and Water Distribution Regulatory Authority]

FAQ – Frequently Asked Questions

MLR – Maximum Residue Level

OP – Organic Production

EDT – Economic Damage Threshold

QS – Quality Standard

EQS – Environmental Quality Standard

CAP – Common Agricultural Policy

NAP – National Action Plan

PPP – Plant Protection Product

IPM – Integrated Pest Management

NRCP – National Residue Control Plan

IP – Integrated Production

AR – Autonomous Region (Madeira and the Azores)

MR – Mutual Recognition

Y/N –Yes/No

SAA – Serviço de Aconselhamento Agrícola [Agricultural Advisory Service]

SNAA – Serviço Nacional de Avisos Agrícolas [National Agricultural Information Service]

VALORFITO/SIGERU – Sistema Integrado de Gestão de Embalagens e Residuos em Agricultura, Lda. [Integrated system for the Management of Agricultural Packaging and Waste]

NATIONAL ACTION PLAN

FOR THE

SUSTAINABLE USE OF

PLANT PROTECTION PRODUCTS

– NATIONAL CONTEXT OF THE USE OF

PLANT PROTECTION PRODUCTS –

(VOLUME II)

Lisbon 2013

MINISTÉRIO DA AGRICULTURA, DO MAR, DO AMBIENTE E DO ORDENAMENTO DO TERRITÓRIO

[MINISTRY FOR AGRICULTURE, THE SEA, THE ENVIRONMENT AND REGIONAL PLANNING]

DIREÇÃO-GERAL DE ALIMENTAÇÃO E VETERINÁRIA

[DIRECTORATE GENERAL FOR FOOD AND VETERINARY AFFAIRS]

NATIONAL ACTION PLAN FOR THE SUSTAINABLE USE OF PLANT PROTECTION PRODUCTS

NATIONAL CONTEXT OF THE USE OF PLANT PROTECTION PRODUCTS
(VOLUME II)

Lisbon
2013

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I. Introduction

The placing on the market and sale of plant protection products in Europe is heavily regulated by a framework of harmonised rules which seek to ensure a high level of protection of both human and animal health and the environment and at the same time to safeguard the competitiveness of EU agriculture. These principles have been adopted since 1991, following publication of Directive 91/414/EEC concerning the placing of plant protection products on the market.

The use of plant protection products can provide significant benefits to society by increasing the availability of high-quality food at reasonable prices. Due to their nature, however, these products may be prejudicial to living organisms since there are risks associated with their use. These risks must be accurately assessed and appropriate measures to minimise them must be defined.

Innovative EU legislation on plant protection products, commonly known as the 'Pesticides Package', has recently been published. Directive 2009/128/EC was accompanied by Regulation (EC) No 1107/2009, which tightened the requirements for protecting human and animal health and the environment and improved the functioning of the internal market. This was achieved by harmonising the rules on placing plant protection products on the market and reinforcing them according to the precautionary principle to ensure that active substances or products placed on the market do not have any harmful effect on human or animal health or the environment.

With the purpose of producing statistical data allowing Member States and the EU as a whole to monitor the situation and its development at all times, Regulation (EC) No 1185/2009 concerning statistics on plant protection products was also published in 2009.

Directive 2009/128/EC, which requires Member States to present National Action Plans on the sustainable use of plant protection products to the European Commission, establishes obligations in various areas and gives each Member State a degree of freedom to implement them according to national circumstances under the principle of subsidiarity. While always seeking to protect human health and the environment, the Directive encompasses the conditions of sale of plant protection products, the proper operation of application equipment, aerial applications, specific measures to protect water resources, applications in specific areas, handling, storage and treatment of packaging waste and surpluses and the extension to all professional users of the adoption of integrated pest management principles. Particular attention is paid on a cross-cutting basis to training professional users and providing information to and raising the awareness of the general public. Despite the Directive's broad context and the legal framework it establishes, Law No 26/2013 of 11 April 2013 was recently published to regulate the distribution, sale and application of plant protection products for professional use and adjuvants of plant protection products and to define the procedures for monitoring the use of such products. This Law, together with Decree Law No 86/2010 of 15 July 2010, transposes Directive 2009/128/EC and thus represents the new legal framework governing the sale and use of plant protection products.

This volume (Volume II) outlines the current situation regarding the use of plant protection products in the light of the realities of national agriculture, identifies relevant legislation in a variety of areas relating to the sustainable use of such products and summarises action taken prior to publication of the Directive. This approach has highlighted the need for action, which is reflected in the strategy developed in Volume I.

II. Use of Plant Protection Products in National Agroforestry

2.1. Social profile

According to the Agricultural Census (INE, 2009), the family agricultural population, formed by agricultural producers and members of their household, whether they have worked on the respective holdings or not, involves 793 000 people, representing around 7% of Portugal's resident population.

The rural population aged considerably from 1999 to 2009, rising from an average of 46 years of age to 52 years of age. The number of people of 65 years of age or over accounted for one third of the population concerned in 2009, over 9% more than in 1999.

The level of education of the family agricultural population is very low: 40% of those concerned only attended the first cycle, while 22% have not had any education. Despite these indicators, however, significant improvements were recorded in the 10 years under study, during which the illiteracy rate fell by 7% and enrolment in secondary and higher education increased by 3%.

Agricultural producers continued to be predominantly men, though women now represent around one third, 8% more than in 1999. The average age of agricultural producers is around 63, 11 years more than the agricultural population in general. An analysis of the respective age structure shows that only 2% are under 35 years of age, while almost half (48%) are over 65 years of age.

The level of education of producers is low, 22% having had no education at all, while the majority have only completed the first cycle. A mere 8% of agricultural producers have completed secondary or post-secondary education, and of these just half have completed higher education. There is virtually no illiteracy among producers under 35 years of age, more than one third of whom have completed secondary or higher education, while illiteracy is still very common among producers over 65 years of age. The standard profile of the Portuguese agricultural producer is a 63-year-old male who has only completed the first cycle of basic education, who has had exclusively practical agricultural training and who performs agricultural activities on the holding for around 22 hours per week.

This summary description of the Portuguese agricultural population shows that due to its ageing and low level of education, coupled with little or no specific training, intense awareness-raising and training is required if the objectives of Law No 26/2013 are to be achieved.

2.2. Development of utilised agricultural area (UAA) and type of holdings

According to the Agricultural Statistics (INE 2010), in 2009 the UAA represented an area of 3 668 145 ha with a total of 303 867 holdings. The comparative figures for 1999 were 3 863 894 ha and 412 612 holdings. It was more common for smaller holdings to go out of business: 41% of small-scale holdings of less than 1 ha UAA ceased to operate, compared to 24% of holdings of between 1 and 5 ha UAA. By contrast, the number of holdings of over 100 ha UAA increased by around 6%. Abandonment of UAA was largest in regions in the centre of the country (Beira Litoral, Beira Interior and Ribatejo e Oeste) and in Algarve. The heterogeneous nature of national agriculture is illustrated by the wide variability in the size of holdings, highlighted by the limited number of large-scale holdings of over 1 000 ha (266),

operating on 12% of the UAA.

Organic farming involved an area of 157 168 ha and 1 637 producers in 2009, while 662 producers were engaged in organic livestock production.

According to the Agricultural Census (INE, 2009), Total Standard Output (TSO) at national level stands at over €4.6 billion per year, Alentejo and Ribatejo e Oeste accounting for over half this value. The mainland regions with the lowest contribution to national TSO are Algarve (3%) and Beira Interior (6%). The analysis of holdings according to economic size shows that although large-scale production units (over €100 000 TSO) represent only 3% of total agricultural holdings, they generate over half the annual TSO, with an average per holding of €304 000, 20 times greater than the national average of around €15 200 per holding. The significant asymmetry of national agriculture is also demonstrated by the fact that over three quarters of holdings are very small, generating an average of only €2 500 per holding, and account for a mere 13% of national agricultural TSO.

Against this background of considerable asymmetry, responses must be found which take the different circumstances of national agriculture into account and contribute towards sustainability.

2.3. Authorisation of plant protection products in Portugal

On 31 December 2012, a total of 907 plant protection products were authorised for sale, based on 248 active substances distributed as shown in the following diagram:

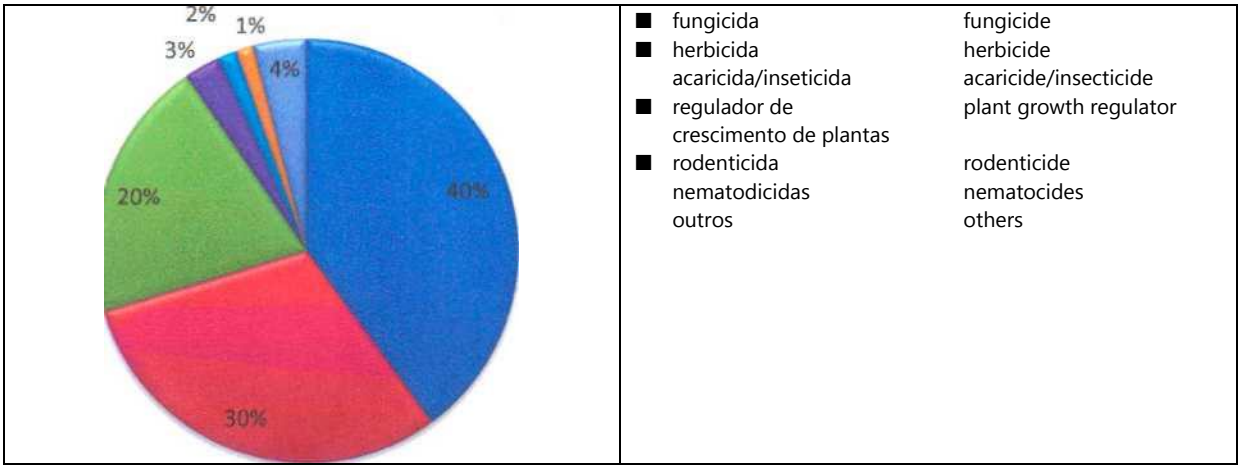


Fig. 2.3.1 – Distribution of plant protection products by function (DGAV, 2013)

This figure clearly shows that the largest volumes of plant protection products on the national market are fungicides, followed by herbicides and insecticides, the remainder as a whole representing no more than 15% of total plant protection products marketed in Portugal.

2.4. Development of sales of plant protection products

Sales of plant protection products at national level represent the indicator which provides an estimate of the use of these products. Under Article 26 of Decree Law No 94/98 of 15 April 1998, data on sales of plant protection products must be sent annually to the national

competent authority for plant protection, the *Direção-Geral de Alimentação e Veterinária* (DGAV) [Directorate-General for Food and Veterinary Affairs], by the organisations responsible for placing such products on the market. The results are published on an annual basis by the DGAV. Sales data are provided by companies or their partners by 31 May 2012, organised by active substance (a.s.) and by chemical group, depending on their function.

According to data published for 2011, at the end of that year 872 plant protection products were authorised for sale in Portugal (excluding out-of-stock items), based on 222 active substances.

The following table shows the volume of sales of plant protection products in 2011 by function.

Table 2.4.1 – Sales of plant protection products in 2011 (kg a.s.) (DGAV, 2012)

	Quantity (kg a.s.)
Fungicides	**9 968 444**
Inorganic	7 412 771
Cupric	715 662
Sulphur	6 697 109
Benzimidazoles	16 584
Diazoles, imidazoles and triazoles	38 871
Carbamates and dithiocarbamates	1 683 964
Morphines	17 233
Others	799 032
Herbicides	**1 995 271**
Phenoxy-phytohormones	48 972
Triazines and triazinones	190 919
Amides and amylases	160 192
Carbamates and bi-carbamates	2 706
Dinitroanilines	31 267
Derivatives of urea, uracil or sulphonylurea	34 209
Others	1 527 007
Insecticides and acaricides	**334 400**
Pyrethroids	7 327
Carbamates and oxime-carbamates	12 352
Organophosphates	301 782
Organic produce or produce of botanical origin	2 063
Others	10 967
Plant growth regulators	**3 868**
Molluscicides	**10 317**
Other plant protection products	**1 690 163**
Mineral oil	542 247
Soil fumigants	1 316 413
Rodenticides	6314
All remaining plant protection products	21 104
TOTAL*	**14 002 464**

* Decimals adjusted due to adding of adjustments in items

Fungicides represent around 71% of the plant protection products sold. Sulphur, representing

90% of the volume of inorganic fungicides, accounted for 67% of total fungicides and represented 40% of total plant protection product sales.

Herbicides accounted for around 14% of sales of plant protection products, while insecticides/acaricides accounted for 2% of total sales. Nematocides and soil fumigant products accounted for 8% of total sales. The remaining groups of products account for sales volumes with no impact on the total value concerned.

The following graphs show the development of total sales and the principal groups over five years (2007-2011) (Figs. 2.4.1 to 2.4.5).

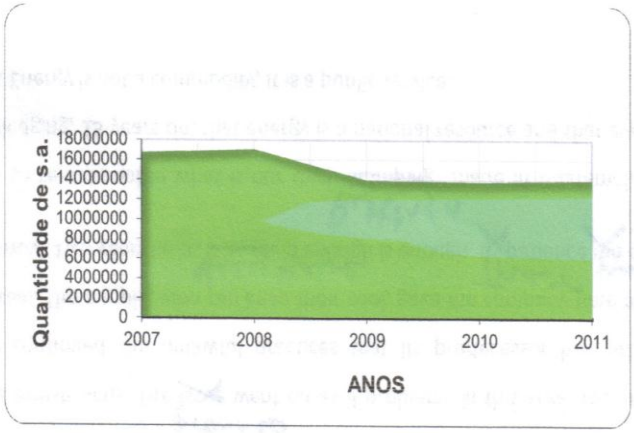


Fig. 2.4.1 – Development of total sales of plant protection products (DGAV, 2012)

Quantidade de s.a.	Quantity of s.a.
ANOS	YEARS

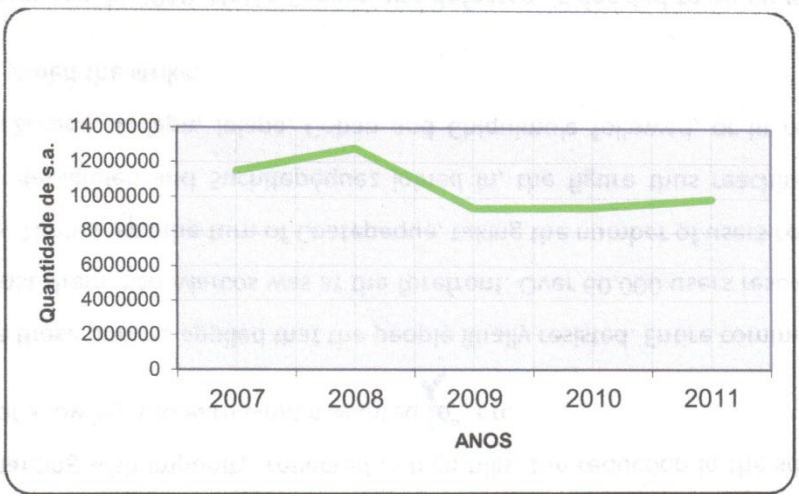


Fig. 2.4.2 – Development of sales of fungicides (DGAV, 2012)

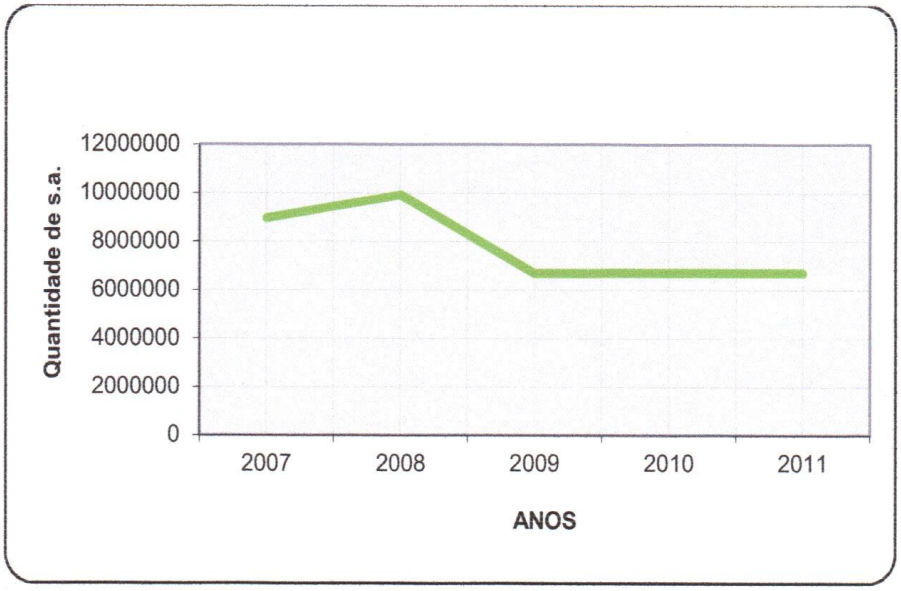


Fig. 2.4.3 – Development of sales of sulphur (DGAV, 2012)

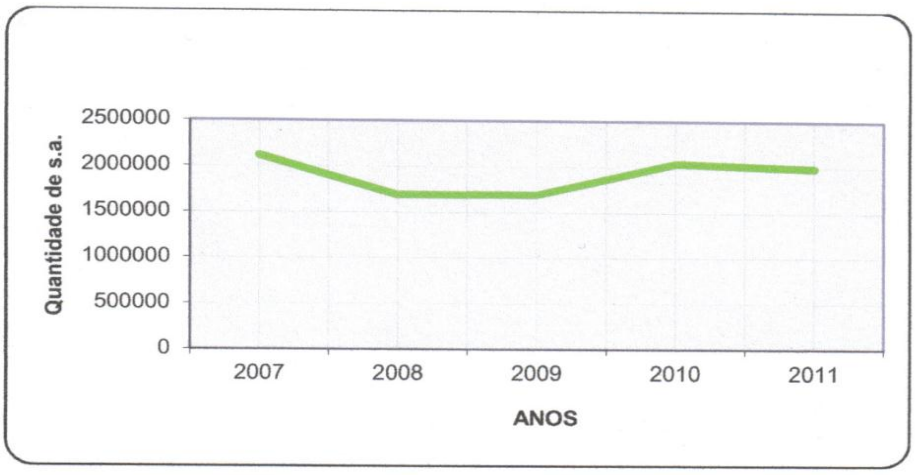


Fig. 2.4.4 – Development of sales of herbicides (DGAV, 2012)

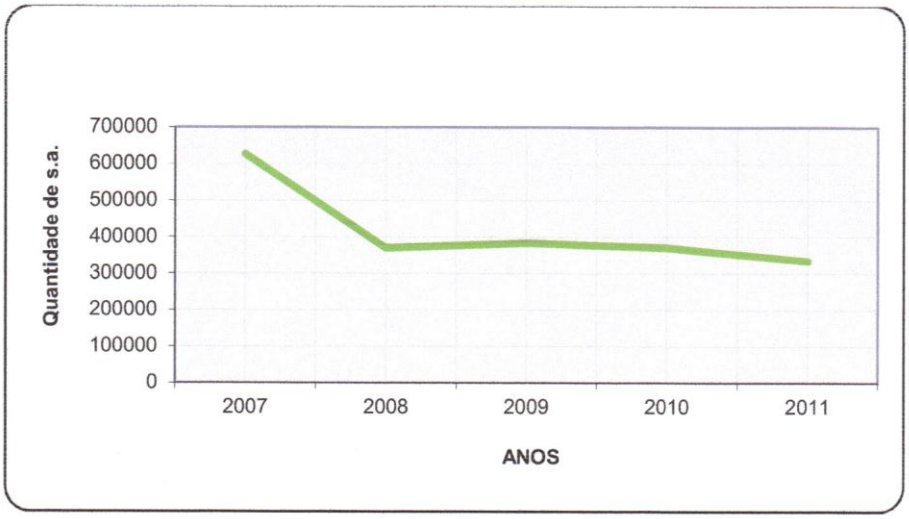


Fig. 2.4.5 – Development of sales of insecticides and acaricides (DGAV, 2012)

According to the Agricultural Statistics (INE, 2011), the ratio of sales of plant protection products/utilised agricultural area in 2008, 2009 and 2010 was 4.6, 3.8 and 3.8 respectively. If the value of sulphur is subtracted from total sales, the ratio is 1.9, 2.0 and 1.9 respectively.

III. National Context of the Use of Plant Protection Products.

3.1. Legal framework

Because of Portugal's geographical situation and favourable climate, the country's agriculture is highly varied in terms of crops grown, though it also suffers from many plant health problems. This necessitates a crop protection strategy involving the intensive use of all available means, particularly plant protection products, which must be sufficient in number and chemical diversity (different means of action) to ensure adequate prevention of crop pest resistance.

In this context the use of plant protection products as a production factor is particularly important since they account for a substantial proportion of the yield obtained from production, which varies according to the crop concerned and the intensity of use of such products in pest control, which in turn depends on the number, type and severity of the effects caused by the various pests.

Directive 2009/128/EC provides for coordination with the Water Framework Directive (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), and this action plan must therefore take account of the provisions and philosophy of that Directive, particularly with respect to water resource protection.

The national and EU legislation whose application in Portugal has direct and indirect implications for the marketing and use of plant protection products will now be summarised.

a) Placing of plant protection products on the market

- **Decree Law No 94/98 of 15 April 1998**, laying down implementing technical standards for Decree Law No 284/94 of 11 November 1994, which transposes into national law Council Directive 91/414/EEC of 25 July 1991 concerning the placing of plant protection products on the market, and establishing the scheme for approving, authorising, placing on the market, using, controlling and monitoring such products.

Based on the precautionary principle and on preventing the risks and effects of plant protection products on human health and the environment, this Decree Law establishes a harmonised uniform procedure among Member States for approving such products. It introduces for the first time a harmonised uniform system ensuring the Community assessment of active substances with a view to their approval at EU level and their inclusion in Annex I of Directive 91/414/EEC. This is achieved by applying data and information requirements on the active substance and plant protection product envisaged in Annexes II and III of the Directive and the uniform evaluation and decision-making principles provided for in Annex VI, which are to be applied in authorising plant protection products. This national procedure is consistent with the principle of subsidiarity between Member States.

In the light of certain requirements concerning physical and chemical properties, methods of analysis, toxicology, consumer health, ecotoxicology and the environment consistent with the technical and scientific progress prevailing at the time, the implementation of Directive 91/414/EEC at Community and national level provided for the revision of around 1 000 active substances and led to the withdrawal of over 600 such substances from the Community market, thereby significantly reducing the number of substances that could be used in plant

protection products.

Together with the Community revision of substances, new substances introduced into the market in the meantime are also evaluated according to the same principles.

In addition to the provisions in Annexes II, III and VI of the Directive, Annexes IV and V refer to the risks identified in evaluating the intrinsic characteristics of the substance and its plant protection product and the safety measures to be taken to minimise the risk associated with the use of the product concerned, which Member States adopt after evaluating its various components while also taking the associated agricultural practice into account. It is mandatory to affix these indications on packaging labels, and users of the product must comply with them.

This Directive was subsequently repealed by Regulation (EC) No 1107/2009, though some of its provisions applied on a transitional basis.

- **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.

This EU legislation, which is directly applicable in Member States, forms the current legal framework for authorising plant protection products in Portuguese territory. Its objectives, based on reinforcing the precautionary principle, seek to guarantee a high level of protection of human health and the environment while simultaneously preserving agricultural competitiveness.

This legislation revises and updates the previous legislation, i.e. Directive 91/414/EEC, while maintaining the harmonised EU procedure for approving active substances operated by the Member States, the European Commission and the European Food Safety Authority (EFSA). The assessment of substances presupposes their evaluation at EU level and national authorisation of the plant protection product. Europe is divided into three areas in this respect, which means that an application to authorise the placing of a plant protection product on the market is submitted on a zonal basis, and that the work between Member States to ensure national authorisation is shared. This includes *inter alia* assessing the intended use of the product and its behaviour in the various environmental compartments – soil, surface and groundwater, air – and its effects on non-target organisms, particularly plants, birds and other land vertebrates, aquatic organisms including fish, invertebrates, algae and higher plants, beneficial arthropods, including bees and other pollinators, macro- and micro-organisms in the soil, and the possible impact on waste water treatment.

The content of an authorisation includes conditions and restrictions relating to the plant protection product which seek to ensure its safe use, including its classification, the category of user concerned and safety indications to be followed in handling and applying the product and handling packaging waste.

The Regulation additionally includes particularly important aspects which also contribute to achieving the objectives set out in Directive 2009/128/EC, i.e. the mandatory requirement to record all professional activities relating to the placing on the market, marketing, distribution and application of plant protection products, with special attention being paid to their correct use.

b) Marketing, distribution and use of plant protection products

- **Decree Law No 173/2005 of 21 October 2005**, which regulates the distribution and sale of plant protection products, provision of the respective application services and the application of such products by end-users.

This Decree Law established the first national framework for regulating the commercial distribution and sale of plant protection products with a view to reducing their risks and impacts on human health and the environment. The primary aim was to achieve the objectives set out in the strategy for the sustained use of these products formulated by the European Commission. This legal framework defined the fundamental aspects of the responsible sale of plant protection products by introducing the technician responsible for distribution and sales activities, who must have undergone training commensurate with his or her responsibilities. This also applies to sales operators, who have responsibilities relating to the sale and handling of these products. This Decree Law also helped to promote good storage practice for plant protection products by establishing measures governing their distribution and sale, the installation of storage or distribution facilities and the licensing of the respective sales outlets, in compliance furthermore with legislation in force on safety and health at work and protection against fire risks.

This legal framework also introduced a penalty scheme for the inappropriate marketing and use of plant protection products, which can only be applied by professional users who provide evidence of their technical competence and who hold the respective certificates.

- **Law No 26/2013**, which regulates the distribution, sale and application of plant protection products for professional use and adjuvants of plant protection products and defines the procedures for monitoring the use of such products, transposing into national law 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, and repealing Law No 10/93 of 6 April 1993 and Decree Law No 173/2005 of 21 October 2005.

This Law brings up to date and reinforces the provisions previously established in DL No 173/2005. It is nevertheless an adaptation to the new EU guidelines set out under Directive 2009/128/EC, which is based on the sustainable use of pesticides by reducing the risks and effects of their use on human health and the environment and promoting the use of integrated pest management or alternative techniques such as non-chemical alternatives. This Law therefore develops aspects relating to the safe marketing, storage and use of plant protection products and the monitoring of records relating to such activities, regulates aerial applications in compliance with the general principle of prohibition, and regulates the application of these products in urban and recreational areas and communication routes.

- **Decree Law No 101/2009 of 11 May 2009**, which regulates the non-professional use of plant protection products in domestic environments and introduces conditions for their authorisation, sale and application.

This Decree Law aims to provide a framework for the authorisation, sale and use of plant protection products in domestic environments by non-professional users. These products may be purchased, handled and applied by the general public in plant protection at domestic level, either in dwellings or on surrounding or nearby land. Within this framework, general public access is naturally restricted to certain categories of product, particularly those considered to

be highly toxic to humans or which represent a particular health hazard if people are exposed to them during their handling or application. Such products may nevertheless be marketed in commercial outlets, including those not intended solely for the sale of plant protection products, though they must be separated from other consumer goods. These outlets must also ensure that information on their safe handling and use is available or can be provided when they are purchased by the general public.

This Decree Law also prohibits the application by non-professional users of plant protection products authorised for use by farmers and other professional operators.

- **Decree Law No 86/2010 of 15 July 2010**, which establishes the mandatory inspection scheme for application equipment for plant protection products authorised for professional use.

Decree Law No 86/2010, which transposes Article 8 of Directive 2009/128/EC into national law, introduced the mandatory inspection scheme for application equipment for plant protection products authorised for professional use. This Decree Law seeks to ensure that all application equipment is inspected on a regular basis, though provision is made for exempting handheld application equipment and application equipment not used for spraying plant protection products, without overlooking the need for periodic verification, calibration and maintenance of devices to ensure their proper performance.

Mandatory duly licensed *Centros de Inspeção Periódica* [Centros IPP – CIPPs – periodic inspection centres] for plant protection product application equipment were also established and provision was made for authorising appropriately trained technicians to inspect essential equipment and accessories to ensure their proper performance.

- **Decree Law No 187/2006 of 19 September 2006**, which establishes the safety requirements and procedures concerning systems for managing plant protection product packaging waste and surpluses.

This Decree Law establishes the legal framework for managing plant protection product packaging waste and surpluses on agricultural holdings and defines procedures for their packaging and collection, whether on the holding or in collection facilities, in compliance with environmental safety principles. It also supplements and amends Article 19 of Decree Law No 173/2005. This act regulates the operation of (individual or collective) management systems for such waste, referring the respective licensing/authorisation back to Order in Council No 29-B/98 of 15 January 1998, based on the sharing of responsibility by the various parties involved, from companies holding sales or parallel import authorisations for plant protection products to end-users. It also defines the safety procedures to be observed by facilities which receive, collect, temporarily store and forward plant protection product packaging waste and surpluses. Under these procedures and according to indications on labels, farmers take measures on their holdings to minimise the level of packaging waste, including triple washing and the possible destruction of empty packaging, depending on the type of material and the respective capacity. They also pack waste in bags for subsequent delivery on pre-established dates to authorised collection centres, which forward it for future energy recovery or disposal under the system for managing and recovering plant protection product waste. Provision is also made for the establishment of collection centres linked to the licensed management systems to receive plant protection product packaging waste and surpluses. These centres form a national network organised according to proximity which encourages the forwarding of such waste to the management systems.

- **Order in Council No 758/2007 of 3 July 2007**, which refers responsibility for collecting and managing plant protection product packaging waste with a capacity or weight equal to or greater than 250 l or 250 kg back to the company holding the respective sales or parallel import permit.

This legislation defines the party responsible for collecting packaging waste with a capacity or weight equal to or greater than 250 l or 250 kg, referred to in Article 5(1) of Decree Law No 187/2006 of 19 September 2006, attributing responsibility to the company holding the sales or parallel import authorisation, until organisations managing plant protection product packaging waste of the capacity or weight referred to above are licensed.

- **Decree Law No 147/2008 of 29 July 2008**, as amended by Decree Law No 245/2009 of 22 September 2009, Decree Law No 29-A/2011 of 1 March 2011 and Decree Law No 60/2012 of 14 March 2012, which establishes the legal system of liability with regard to environmental damage and transposes into national law Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004, which approved, on the basis of the polluter pays principle, the system covering environmental liability with regard to the prevention and remedying of environmental damage, as amended by Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries, and by Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide.

This Decree Law applies to environmental damage or to an imminent threat of such damage caused by any occupational activity carried out in the course of an economic activity, even if caused by diffuse pollution. The operator causing environmental damage or creating an imminent threat of such damage must immediately take the appropriate measures to prevent and remedy such damage or threat. The occupational activities covered by this legislation include the use of plant protection products (Annex III(7)(c)).

c) Classification, packaging and labelling of plant protection products

- **Decree Law No 82/2003 of 23 April 2003**, which approves the regulations for the classification, packaging, labelling and safety action records of dangerous preparations.

In connection with plant protection products, the application of this Decree Law on the classification, packaging and labelling of dangerous preparations, which transposes Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999, is particularly important. This act, as amended by DL 63/2008 of 2 April 2008 and which will be repealed in stages by Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008, provides for the mandatory classification, packaging and labelling of dangerous preparations before they are placed on the market. It therefore applies to plant protection products and supplements legislation on their placing on the market.

In compliance with and supplemented by the latter Regulation, Regulation (EU) No 547/2009 of 8 June 2009, which implements Regulation (EU) No 1107/2009 in relation to plant protection product packaging requirements, is also applied.

d) Establishment of Maximum Residue Levels (MRLs) and their control

- **Regulation (EC) No 178/2002 of 28 January 2002**, laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety.

- **Regulation (EC) No 882/2004 of 29 April 2004** on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules.

- **Regulation (EC) No 396/2005 of 23 February 2005** on maximum residue levels of plant protection products in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC.

- **Regulation (EC) No 669/2009 of 24 July 2009**, implementing Regulation (EC) No 882/2004 as regards the increased level of official controls on imports of certain feed and food of non-animal origin and amending Decision 2006/504/EC.

- **Regulation (EU) No 1277/2011 of 8 December 2011**, amending Annex I to Regulation (EC) No 669/2009 implementing Regulation (EC) No 882/2004 as regards the increased level of official controls on imports of certain feed and food of non-animal origin.

- **Decree Law No 144/2003 of 2 July 2003** (repealed, except for Articles 10 and 11), laying down the scheme for maximum residue levels for plant protection products permitted in agricultural products of plant origin intended for human consumption or, albeit occasionally, for use as feedingstuffs, hereinafter referred to as agricultural products, and in the same agricultural products when dried or processed or after being incorporated into compound feed, insofar as they may contain plant protection product residues.

- **Decree Law No 39/2009 of 10 February 2009**, implementing and ensuring compliance in national law with the obligations arising out of Regulation (EC) No 396/2005.

In particular, Regulation (EC) No 396/2005 introduces the scheme for establishing EU-harmonised MRLs for plant protection products in food and feed and procedures for their control. This basic legal tool for defining MRLs constitutes a standard which, when not exceeded, attests to food safety and allows freedom of movement in the European market for plant products treated with protection products. The establishment of MRLs not only concerns food safety but also control of the use of plant protection products in crops.

This Regulation also establishes the requirement for Member States to define their national multiannual programmes for controlling pesticide residues in products of plant origin and to submit the respective results to the European Commission, the European Food Safety Authority and other Member States.

Its principal objective is to assess the exposure of national and European consumers to pesticide residues in agricultural products of plant origin intended for human consumption by the appropriate selection of such products and of pesticides in accordance with a representative and enforceable sampling plan which takes installed capacity in pesticide residue laboratories into account. It also seeks to ensure compliance by food chain operators with national and EU legislation on pesticide residues in agricultural products of plant origin

intended for human consumption.

The following Decree Laws also supplement the above legislation:

- **Decree Law No 53/2008 of 25 March 2008**, which transposes into national law Commission Directive 2006/125/EC of 5 December 2006 and establishes the legal scheme applicable to foodstuffs for particular nutritional use fulfilling the particular requirements of infants and young children in good health and intended for use by infants while they are being weaned and by young children as a supplement to their diet and/or for their progressive adaptation to ordinary food.

- **Decree Law No 217/2008 of 11 November 2008**, which transposes into national law Commission Directive 2006/141/EC of 22 December 2006 with respect to infant formulae and follow-on formulae, establishes the respective legal scheme and repeals Decree Laws No 220/99 of 16 June 1999, 286/2000 of 10 November 2000 and 138/2004 of 5 June 2004.

Decree Laws No 53/2008 and 217/2008 establish a cross-cutting residue level for each specific pesticide of 0.01 mg/kg of product ready for consumption or reconstituted in accordance with the manufacturer's instructions for cereal-based foods, baby foods, infant formulae and follow-on formulae respectively, though exceptions to this level are provided for. They also prohibit the use of certain pesticides in agricultural products intended for the above formulae, stipulating a reduction in the limit to 0.003 mg/kg.

An annual report coordinated under DGAV responsibility is produced on the implementation of the control programme.

e) Biodiversity conservation

- **Decree Law No 140/99, republished by Decree Law No 49/2005**, transposes into national law Directive 79/409/EEC on the conservation of wild birds and Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora.

- **Decree Law No 142/2008** establishes the legal scheme for nature and biodiversity conservation.

f) Environmental quality in water policy

- **Law No 58/2005 of 29 December 2005**, which approves the *Lei da Água* [Law on Water], transposes Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 into national law and establishes the bases and institutional framework for sustainable water management. This law was amended by Decree Law No 245/2009 of 22 September 2009 and Decree Law No 130/2012 of 22 June 2012. Seeking to maintain and improve the aquatic environment, this Law establishes the framework for managing surface and groundwater with a view to preventing further deterioration and protecting and enhancing the status of aquatic and terrestrial ecosystems and wetlands, promoting the sustainable use of water based on a long-term protection of available water resources, ensuring enhanced protection and improvement of the aquatic environment through specific measures to reduce or eliminate discharges, emissions and losses of priority substances, ensuring the progressive reduction of pollution of groundwater and preventing its further pollution.

The Law on Water (based on the Water Framework Directive) thus seeks to protect surface and groundwater bodies and sets a deadline of 2015 for achieving the environmental objectives through the adoption of measures defined in legislation and planning instruments (River Basin Management Plans, National Water Plan, among others).

In this context the good status/ecological potential and good chemical status of surface water bodies and the good quantitative and chemical status of groundwater bodies must be ensured by 2015 (notwithstanding the extensions and derogations envisaged).

The measures provided for in this legislation for pesticides include limiting or even prohibiting the application and storage of plant protection products and disposal of the respective waste in particularly sensitive areas. In the case of the abstraction of drinking water, it establishes the need to distinguish areas for protecting such abstraction (particularly against pollution caused by plant protection products). Emissions or discharges of priority substances which present a significant risk to the aquatic environment must be reduced or even eliminated in the case of priority hazardous substances. Pollution caused by other hazardous substances likely to prevent the achievement of the objectives for surface water bodies must also be reduced.

The defining of environmental objectives also involves the existence of programmes for monitoring water quality.

- **Decree Law No 77/2006 of 30 March 2006** supplements the transposition of Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000, which establishes a framework for Community action in the field of water policy, and develops the scheme established in Law No 58/2005 of 29 December 2005.

This Decree Law defines the technical standards for characterising and monitoring the qualitative and quantitative status of groundwater and surface water, while also establishing criteria for defining maximum emission levels and environmental quality standards for the principal pollutants and the list of priority substances and priority hazardous substances (repealed by Decree Law No 103/2010 of 24 September 2010), emissions of which are to be reduced or eliminated.

- **Decree Law No 226-A/2007 of 31 May 2007**, as amended, establishes the system for regulating the use of water resources.

- **Decree Law No 208/2008 of 28 October 2008**, which transposes Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 into national law, establishes the scheme for protecting groundwater against pollution and deterioration. This Decree Law establishes the groundwater Quality Standard (QS) for pesticides (including their relevant metabolites, breakdown or reaction products) at 0.1 μg/l per active substance and 0.5 μg/l for total active substances detected. **Decree Law No 107/2009 of 15 May 2009** approves the scheme for protecting reservoirs and lagoons or lakes whose waters are to be used in the public service. It also includes provisions governing pesticide use and storage and residue management.

- **Order in Council No 1284/2009 of 19 October 2009** establishes the content of river basin management plans.

- **Decree Law No 103/2010 of 24 September 2010**, which transposes Directive 2008/15/EC of the European Parliament and of the Council of 16 December 2008 and partially transposes Commission Directive 2009/90/EC of 31 July 2009, establishes Environmental Quality Standards (EQS) relating to the chemical status of surface water bodies for 33 priority substances and another eight pollutants. With respect to plant protection products, alachlor, atrazine, chlorfenvinphos, chlorpyrifos, diuron, endosulfan, hexachlorobenzene, hexachlorocyclohexane (lindane or isomer and hexachlorocyclohexane), isoproturon, simazine and trifluralin are listed as priority substances. Plant protection products containing any of the priority hazardous substances listed are currently not authorised in Portugal. DDT (total and pp'-DDT) was included in the other pollutants group while aldrin, dieldrin, endrin and isodrin were included in the cyclodiene group. The list of substances in this act is also currently being revised at EU level. This Decree Law was amended by Decree Law No 83/2011 of 20 June 2011.

g) Quality of drinking water

- **Decree Law No 382/1999 of 22 September 1999** establishes the rules and criteria for marking protection boundaries for the abstraction of groundwater for public supply. This act specifically determines that any facility or activity (except for activities relating to the abstraction itself) is prohibited in the immediate protection zone, and that certain activities may be prohibited or subject to conditions in the intermediate protection zone, particularly the application of mobile and persistent pesticides in water, or pesticides which may form toxic, persistent or bioaccumulative substances. This is supplemented by Order in Council No 702/2009 of 6 July 2009, which establishes the terms for marking protection boundaries for the abstraction of groundwater for public supply for human consumption and the respective constraints.

- **Decree Law No 306/2007 of 27 August 2007** establishes the drinking water quality scheme and revises Decree Law No 243/2001 of 5 September 2001.

This legislation transposes Directive 98/83/EC of 3 November 1998 into national law. Under this legislation management bodies must monitor pesticides which are likely to be present in a particular supply zone, taking the location of the water source into account. In this context the National Plant Protection Authority is responsible for defining for each year the pesticides to be tested by the management bodies in the following year. It is also assumed that particular supply zones will be exempted from pesticide testing on the basis of an analysis of the predominant agricultural practices in each farming region, indicators relating to the use of pesticides in the area of influence of the abstraction and the type of geographical location of the latter.

h) Sustainable production and protection

- **Regulation (EC) No 1698/2005 of 20 September 2005**, which establishes the general rules of support for sustainable rural development, seeks to improve the environment and the countryside.

- **Regulation (EC) No 834/2007 of 28 June 2007** on organic production and labelling of organic products repeals Regulation (EEC) No 2092/91.

- **Regulation (EC) No 889/2008 of 5 September 2008** lays 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.

- **Decree Law No 256/2009 of 24 September 2009**, **as amended by Decree Law No 37/2013 of 13 March 2013**, establishes the principles and guidelines for integrated pest management and production and the system of technical standards applicable to integrated pest management, integrated production and organic production, and introduces a system for recognising technicians competent in these areas in the context of primary agricultural production.

i) Safety and health at work

- **Law No 102/2009 of 10 September 2009** on the legal scheme for promoting safety and health at work regulates certain aspects regarding the protection of workers from risks due to exposure to chemicals.

- **Decree Law No 254/2007 of 12 July 2007** establishes the scheme for preventing major accidents involving dangerous substances and limiting their consequences for man and the environment, transposing into national law Directive 2003/105/EC of the European Parliament and of the Council of 16 December 2003, which amends Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances.

- **Decree Law No 24/2012 of 6 February 2012** consolidates the minimum provisions on protecting workers from risks due to exposure to chemicals at work and transposes into national law Commission Directive 2009/161/EU of 17 December 2009, establishing a third list of 581 indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC of 8 June 2000.

The legislation protecting workers from risks due to exposure to chemicals essentially arises out of the transposition of Community Directives and could be found in different acts. Decree Law No 24/2012 simplifies and consolidates in a single Decree Law the legislation which transposed the above Directives, except for Law No 102/2009 of 10 September 2009 on the legal scheme for promoting safety and health at work, which regulates certain aspects regarding the protection of workers from risks due to exposure to chemicals.

Law No 102/2009 regulates the legal scheme for promoting safety and health at work, as provided for in Article 284 of the Labour Code in terms of prevention, and:

a) the protection of pregnant workers and workers who have recently given birth or are breastfeeding in the case of activities likely to present a specific risk of exposure to agents, processes or conditions of work, as provided for in Article 62(6) of the Labour Code;

b) the protection of minors in the case of work which, due to its nature or the conditions in which it is provided, is prejudicial to their physical, mental and moral development, as provided for in Article 72(6) of the Labour Code.

This act also transposes into national law Council Directive 89/391/EC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers

at work, as amended by Council Directive 2007/30/EC of 20 June 2007, and supplements the transposition of the following Community Directives:

a) Council Directive 91/383/EEC of 25 June 1991 supplementing the measures to encourage improvements in the safety and health at work of workers with a fixed-duration employment relationship or a temporary employment relationship;

b) Council Directive 92/85/EEC of 19 October 1992 on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding;

c) Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work;

d) And with respect to the protection of genetic heritage: directives containing minimum safety and health provisions on chemical, physical and biological agents at work, particularly Council Directive 90/394/EEC of 28 June 1990 on the protection of workers from the risks related to exposure to carcinogens at work, as amended by Council Directive 97/42/EC of 27 June 1997 and Council Directive 1999/38/EC of 29 April 1999; Council Directive 90/679/EEC of 26 November 1990 on the protection of workers from risks related to exposure to biological agents at work, as amended by Council Directive 93/88/EEC of 12 October 1993; and 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.

3.2. Current situation

The current national situation in areas covered by Directive 2009/128/EC and this National Action Plan as a result of the application of the above legislation, which has direct and indirect implications on the marketing and use of plant protection products, will now be outlined.

3.2.1. Safety in the application of plant protection products

- **Pesticide residue control**

With the aim of ensuring compliance with MRLs and assessing consumer exposure to pesticide residues, the official programme for the control of such residues in agricultural products of plant origin intended for human consumption is implemented annually on the basis of the implementing regulations of the Coordinated Multiannual Community Pesticide Residue Control Programme.

At national level the impact of pesticides on agricultural products of plant origin, which due to repeated infringements in previous years must be monitored, is also considered and included in the plan.

This plan is interlinked with the import control plan in defining priorities and selecting the control sample (Commission Implementing Regulation (EU) No 1277/2011 of 8 December 2011) and with the plan for the control of foodstuffs intended for particular nutritional uses (cereal-based foods and baby foods for infants and young children) (Decree Law No 53/2008 of 25 March 2008) and infant formulae and follow-on formulae (Decree Law No 217/2008 of 11 November 2008) in relation to pesticide residues in agricultural products of plant origin intended for human consumption. It also supplements the national food sampling plan in testing for pesticides.

Table 3.2.1 – Results of the Official Control of Pesticide Residues in Products of Plant Origin – 2007-2011 (DGAV, 2012).

Year	No of samples	No of products analysed	No of pesticides tested	% infringements
2007	711	8*+17**	147	7.6
2008	758	8*+19**	146	6.5
2009	969	8*+18**	165	2.9
2010	752	8*+19**	230	2.9
2011	865	9*+19**	250	2.3

NB:*European coordinated programme; **national programme, including Mainland Portugal and Autonomous Regions

- **Protection of professional users – Use of Personal Protective Equipment (PPE)**

Estimating the potential exposure of agricultural operators who handle and subsequently apply products (and prepare spray mixtures, where applicable) and agricultural workers and bystanders who may come into contact with products during or after their application is an integral part of the process for authorising plant protection products. The toxicological profile of a product is used to estimate the risk associated with its use, which will be minimised by wearing appropriate Personal Protective Equipment (PPE). PPE must therefore be worn as a matter of course to minimise the exposure of operators (and other agricultural workers) to plant protection products during plant protection work. The minimum recommended PPE consists of gloves, rubber boots and a full suit. When preparing mixtures, operators must always use visors, with dust masks in the case of dust mixtures.

The use of PPE in national agricultural conditions is generally restricted to the use of rubber boots and gloves in preparing mixtures and applying products, though visors are also used, albeit considerably less often. Full personal protection suits are not used on a regular basis, however, largely because they are uncomfortable in Portuguese climatic conditions (high temperatures for a large part of the year).

Operator protection is not ensured solely by the use of PPE, however, but also by using application techniques which significantly reduce the potential risk of exposure to products. When the crop grown and the cultivated area allow, for example, tractors with cabs are used which significantly reduce potential exposure and represent an effective substitute for personal protective suits, masks and goggles.

Information collected by ANIPLA (the Portuguese national association for the plant protection industry) indicates that at European level only Portugal and Germany have specific standards governing the production of protective suits for applying plant protection products (NP 4462 and DIN 32871). On the basis of the national standard, NP 4462:2007, around 1 000 suits have been produced and marketed in Portugal.

These protective suits have also been certified under EN 13034:2005 (type 6) in other European countries, from which ANIPLA and its member companies have imported hundreds of examples.

3.2.2. Training, sale of plant protection products, information and awareness-raising

- **Training of professional users**

Training on reducing the risks involved in using plant protection products, based on officially defined content, began in Portugal with publication of *Despacho* [Order] 5848/2002 of 15 March 2002. This act defines the content and requirements for trainers and trainees in relation to courses on Plant Protection Product Distribution, Marketing and Application (PPPDMA), Plant Protection Product Distribution and Marketing (PPPDM) and Plant Protection Product Application (PPPA), which are geared towards technicians, sales staff and operators respectively.

The PPPDM and PPPA courses, with syllabuses revised in accordance with the subjects set out in Annex I of Directive 2009/128/EC, are included in the National Qualifications Catalogue. The syllabus of the PPPDMA course has also been updated.

There are also courses on the Specialised Application of Plant Protection Products and the Inspection of Plant Protection Product Application Equipment, the syllabuses and trainer and trainee requirements of which have now been officially defined.

The official system for approving training activities relating to the above-mentioned courses involves authorising training providers and approving the proposed training. Certificates are officially validated after training has been delivered.

Since the setting up of mandatory training is an essential matter to be considered in implementing the requirements of Directive 2009/128/EC, steps have been taken to ensure the respective funding in each Community support programming period.

Data on training carried out and trainees involved in 2011 and 2012 are presented below.

Table 3.2.2 – Training carried out and trainees involved – 2011 and 2012 (DGADR, 2012)

Type of course	Year	No of initiatives	No of trainees
PPPDMA	2011	17	300
	2012	42	630
PPPDMA (update)	2011	13	260
	2012	13	195
PPPDM	2011	12	182
	2012	10	149
PPPA	2011	383	4 680
	2012	285	4 841

- **Information and awareness-raising for plant protection product users**

The plant protection industry has organised many awareness-raising activities on the safe application of its products. In addition to those run by companies on an individual basis under the 'Cultivar a Segurança' project [Cultivate Safety] developed since 2006, ANIPLA has run activities in cooperation with the DRAPs and agrarian colleges under protocols established to set up model farms that satisfy the requirements for storing and applying plant protection products on holdings.

This essentially practical awareness-raising encompasses syllabuses defined for the Application of Plant Protection Products course and contributes towards the professional development of the respective professional operators. Between 2007 and 2012 ANIPLA ran 32 awareness-raising activities involving 900 farmers and technicians on five model farms in mainland Portugal.

- **Responsible sale, authorisation of activities and approval of technicians**

Decree Law No 173/2005 defines the regulatory and disciplinary measures covering commercial activities relating to the distribution, sale and application of plant protection products and aims to reduce the respective health and environmental risks and impacts.

This Decree Law enforces compliance with good plant protection practice in terms of the correct and appropriate use of plant protection products by means of the recommended chemical protection, integrated pest management and integrated production.

This legislation requires premises for storing and selling plant protection products to be equipped to ensure that products are properly preserved and to ensure public health and environmental protection, and they must have an approved technician, adequately trained operators and facilities that meet safety requirements.

A particular requirement to be met by commercial establishments in order to obtain authorisation to engage in activity is the existence of an approved technician who has responsibility *inter alia* for ensuring compliance with current legislation.

The entry into force of Decree Law No 173/2005 began the process of approving technicians, 1 691 of whom had been approved by December 2012. Table 3.2.3 shows the distribution of approved technicians among the country's various districts.

Table 3.2.3 – Distribution of the number of approved technicians per district per year (DGAV, 2013)

Districts/AR	2005	2006	2007	2008	2009	2010	2011	2012	Total
Aveiro	1	31	17	12	2	4	6	1	75
Beja	3	36	10	6	4	5	10	4	78
Braga	2	42	22	10	3	4	2	3	88
Bragança	0	26	16	7	0	2	4	4	59
Castelo Branco	3	11	12	6	4	3	2	2	43
Coimbra	3	47	30	7	7	5	2	4	105
Évora	1	40	12	3	2	5	4	3	70
Faro	2	23	10	12	13	15	9	8	92
Guarda	1	21	12	7	1	1	0	4	47
AR Azores	0	3	34	22	4	3	1	8	75
AR Madeira	0	7	1	3	6	0	1	0	18
Leiria	3	50	15	7	4	1	4	2	86
Lisbon	4	101	31	16	19	8	13	13	205
Portalegre	0	16	2	6	1	2	3	0	30
Porto	4	48	20	9	6	5	14	9	115
Santarém	3	70	30	26	3	6	13	9	169
Setúbal	0	35	6	6	4	4	6	8	69
Viana do Castelo	0	31	18	3	5	4	2	5	68
Vila Real	3	40	24	6	4	8	7	4	96
Viseu	2	55	19	7	3	1	9	6	102
SPAIN							1	1	2
TOTAL	35	742	341	181	95	86	113	98	1691

The development of the approval process shows that the district with the most approved technicians is Lisbon, followed by Santarém and Porto. The island of Madeira has the lowest number (due to its size), followed by Portalegre and Castelo Branco in the interior of the country. Fig. 3.2.1 provides an overview of the current situation and shows the development of technician approvals.

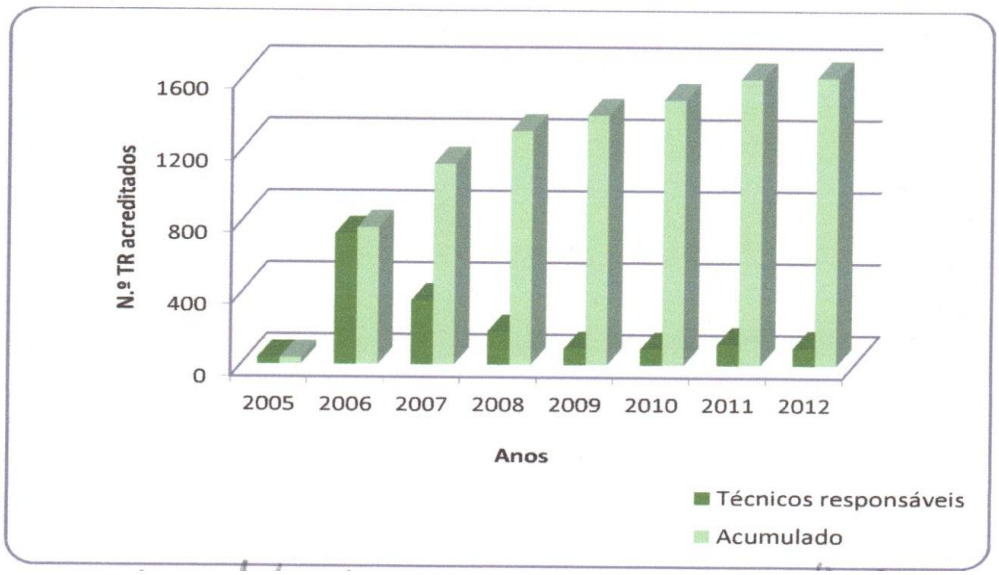


Fig. 3.2.1 – Absolute and cumulative approved technicians per year (DGAV, 2013)

N.º TR acreditados	No of approved technicians
Anos	Years
Técnicos responsáveis	Approved technicians
Acumulado	Cumulative

It can be seen that the highest number of accreditations occurred in 2006, followed by a decrease in subsequent years until 2010, with a slight increase in 2011 and 2012.

The districts concerned have been grouped by administrative regions in order to produce an analysis by DRAP and RA (Fig. 3.2.2).

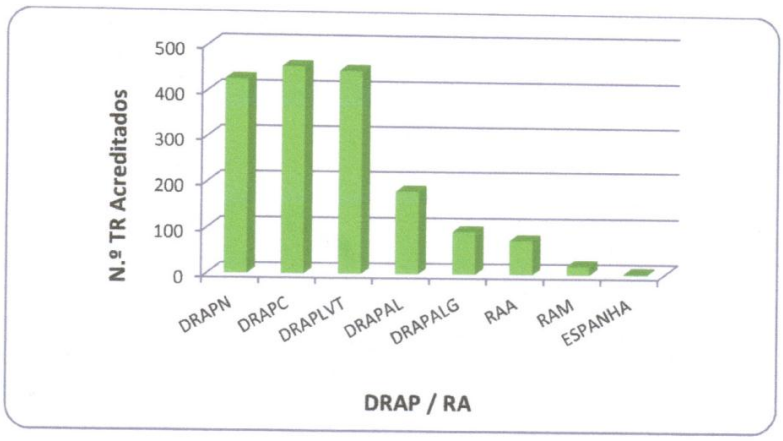


Fig. 3.2.2 – Approved technicians per Regional Agriculture and Fisheries Directorate (DRAP)/Autonomous Region (AR) on 31 December 2012 (DGAV, 2013)

While Table 3.2.1 shows that the districts with the most approved technicians, Lisbon and Santarém, come under the DRAPLVT, Figure 3.2.2 shows that the most representative figures relate to the DRAPC, with 438 approved technicians.

For the reason mentioned above, the Autonomous Region of Madeira (ARM) continues to record the lowest figures, with around 18 approved technicians.

The development of authorisations granted as at 31 December 2012 must be analysed with respect to authorisations to engage in distribution activity (D), sales (V), distribution and sales (DV) and land-based applications (AT) (Fig. 3.2.3).

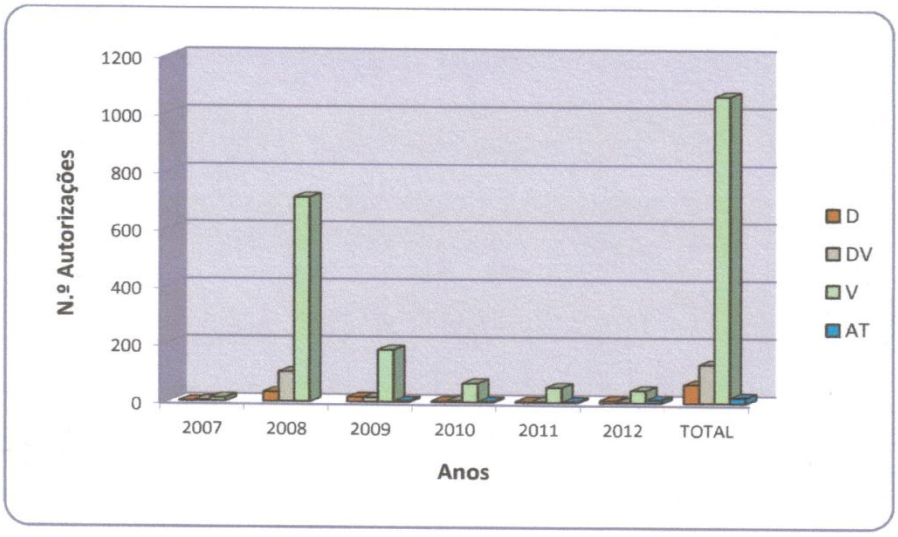


Fig. 3.2.3 – Number of authorisations to engage in activity (DGAV, 2013)

N.º Autorizações	No of approvals
Anos	Years

It can be seen that around 1 285 companies are currently authorised to distribute and sell plant protection products. A major rise in authorisations occurred in 2008, particularly for commercial establishments which only sell plant protection products.

Also significant is the limited number of authorisations granted to companies providing land-based application services in urban areas, communication routes and recreational areas, including gardens, which is where most of the activity of these companies takes place.

- **Code of conduct on the marketing and distribution of plant protection products**

The Code of Conduct on the Distribution and Sale of Plant Protection Products was published in 2010 and drawn up as provided for in Article 20 of Decree Law No 173/2005 of 21 October 2005. This Code constitutes a range of guidelines or standards of conduct to be adhered to by all public or private stakeholders involved in any way in handling plant protection products authorised for sale for professional use during their storage or marketing.

This Code of Conduct is to be used in the context of current legislation on the placing of plant protection products on the market and supplementary legislation, and is intended to represent a standard for good practice in the storage, distribution and sale of such products, since it disseminates the technical guidelines issued by the DGAV as the competent authority in this area.

3.2.3. Inspection of application equipment in use

Decree Law No 86/2010 was published to ensure the national implementation of provisions regulating the inspection of plant protection product application equipment and its maintenance in good condition. In accordance with Directive 2009/128/EC, this Decree Law stipulates that all equipment in use must be inspected at least once by 26 November 2016, and that after this date equipment that has not been inspected, such as handheld application equipment, may not be used, notwithstanding the exceptions provided for. Inspections must be carried out every five years until 31 December 2019 and every three years thereafter.

This Decree Law also sets out the requirements for inspecting spraying equipment mounted on trains or aircraft and boom sprayers larger than 3 m, including boom sprayers mounted on sowing equipment, the inspection of which is mandatory.

The rules for implementing technical aspects relating to compliance with the requirements of the above-mentioned Decree Law can be found in the '*Guia de requisitos e procedimentos para o reconhecimento dos Centros de Inspeção de Equipamentos de Aplicação de Produtos Fitofarmacêuticos – Centros IPP*' [sic], which establishes the requirements to be met by these centres and is published on the DGAV website.

It is estimated that over 56 000 items of plant protection product spraying equipment are used on over 48 000 holdings in Portugal (INE, RGA, 1999). No more recent data has been published, though the stock of machinery on holdings tended to decline between 1999 and 2009, except for tractors, which increased (INE, RGA, 2009).

Until Decree Law No 86/2010 came into force, four private organisations carried out periodic inspections of their members' application equipment through a voluntary scheme, under which 3 392 items of equipment are estimated to have been inspected.

3.2.4. Aerial application of plant protection products

The aerial application of plant protection products in Portugal is a common practice for large-scale crops such as cereals, maize, rice and some vegetable crops, such as tomato. Certain aspects of this application technique are assessed during the process of authorising and placing plant protection products on the market: an estimate is made of the potential exposure of the various environmental compartments, including watercourses, using simple demonstration models harmonised at Community level, and according to this estimate the risk of exposure to the product of the various non-target organisms is assessed. Depending on the results of this risk assessment, the aerial application of a product will only be authorised if it does not involve an unacceptable risk, bearing in mind the proposed use of the product concerned.

In accordance with the aerial application legislation, i.e. Law No 10/93 of 6 April 1993, in force until Law No 26/2013 was published, prior notice of aerial applications of plant protection products was given to the regional agriculture directorates and regional health authorities in the area concerned, the owners of land in these areas being notified by official notices affixed at least eight days in advance. With publication of Law No 26/2013, which repealed the above-mentioned Law and prohibited the aerial application of plant protection products as a general principle, except in limited cases, aerial operators have to be certified and have a specific qualification, and any applications must be authorised beforehand by the DGAV under a plant protection product Aerial Application Plan.

3.2.5. Environmental risks/accidents/incidents involving plant protection products

Due to their nature, plant protection products may cause serious poisoning or have other adverse effects on human health and the environment if they are handled without due care.

The unwanted presence of these products in the environment, particularly in water resources, may be caused by direct or point-source contamination arising from operations involving the preparation of mixtures and the filling of spray tanks or their washing after treatment, since these operations are usually carried out in a specific location on agricultural holdings. It may also be caused by accidental spillage during storage, incorrect disposal of packaging and surplus mixture or disposal in the soil, where they may also have a direct effect, by contact, on micro- and macro-organisms and on the maintenance of fertility.

A further cause may be diffuse contamination during the application of plant protection products as a result of spray drift through the inappropriate or incorrect use of products, and by the spreading of residues that remain in the soil, either by run-off to surface water or by leaching into groundwater.

In order to minimise point-source (including direct) and diffuse contamination of water resources and other environmental compartments such as soils, the use of products containing low-risk active substances rather than active substances classified as priority substances or as hazardous to aquatic organisms must be encouraged, while certain practices and techniques must be implemented or reinforced, such as the use of infrastructure allowing sound management of activities involving plant protection products and their residues and the respective packaging waste. Such practices, techniques or infrastructure should include the establishment of dedicated areas for preparing mixtures, filling spray tanks and cleaning equipment, the optimising of spraying equipment, devices and techniques to reduce surplus mixture and their immediate cleaning after use, and systems for treating waste mixture to

ensure its degradation and removal by appropriate management.

Recommendations and procedures currently exist which were established under the TOPPS project – 'Train Operators to Prevent Pollution from Point Sources'. Their aim is to improve the management of contamination caused by plant protection product filling, cleaning and application operations, while at national level systems for managing surplus mixtures or water used to wash application equipment are yet to be generalised. Some systems recording positive results have already been installed on the ground, however, such as 'biobed' and 'biofilter' biological treatment systems, i.e. PHYTOBAC®, or physical treatment systems such as HELIOSEC®. Further work needs to be done in this area to generalise such practices, though the legal framework necessary for effective implementation must first be published.

3.2.6. Specific measures to protect the aquatic environment and drinking water

- **Risk mitigation measures**

In terms of assessing plant protection products with a view to their authorisation and placing on the market, measures to reduce the risks associated with their handling and application have been established to safeguard human health during such processes and when preparing and applying spray mixtures. In accordance with recommended agricultural practice, this also ensures that residues of the product, the active substance or their breakdown products do not endanger consumer health. It is also important to ensure that residues which persist in the environment do not have adverse effects on non-target organisms.

In this context and according to the degree of risk associated with the use of the product, mitigation measures have been defined to reduce exposure and thus the incidence of the expected adverse effects to acceptable levels. The recommended risk reduction measures imposed to ensure the safe use of plant protection products with a view to protecting the environment include the establishment of 'buffer zones' to protect the aquatic environment. This is recognised as the most important mitigation measure in the product authorisation process.

The expression 'buffer zone' has been used since the 1990s to refer to a zone or strip of land intended to protect an area which is vulnerable to external factors. These zones may be aquatic, land, or transitional, such as riparian areas, salt marshes, fens etc. When associated with plant protection products this concept refers to the establishment of strips of land beside watercourses to protect non-target aquatic organisms or the water resource because of its biodiversity or landscape importance, or because it is a source of drinking water, the expression 'protection zone' also being used in the latter cases.

Various factors influence the effectiveness and width of a buffer zone, including the slope of the land, precipitation, the type of soil and its permeability and the type of plant cover. The width of the protection strip is also determined by the resource it is intended to protect, with distances from watercourses as diverse as 10 m to stabilise riverbanks or 100 m to protect non-target organisms being known.

The first buffer zones associated with the use of plant protection products were defined according to the eco-toxicological profile of these products, the above-mentioned distances being established on the basis of the precautionary principle, with no basic technical-scientific support. However, the great variability between areas deemed to be vulnerable, the development of application techniques and equipment and progress in the use of methods for

estimating exposure to and assessing risks have also had an impact on the adoption of buffer zones.

In 2004 the FOCUS Working Group on Landscape and Mitigation Factors in Ecological Risk Assessment, set up with European Commission support, exhaustively surveyed the risk mitigation measures recommended by several Member States in the plant protection product authorisation process and found that the principal measure is to establish buffer zones, possibly in association with other measures and techniques to reduce watercourse exposure.

In addition to these zones, spray drift mitigation measures (anti-drift nozzles) are gradually being recommended in Portugal. These are now widely available on the market and the literature suggests they may lead to a 50 to 95% reduction in spray drift.

Risk mitigation measures, which have been established in Portugal since the 1980s, have developed in number and degree in line with technical and scientific progress, supported by an appropriate legal framework.

With respect to products authorised in Portugal whose use for the authorised agricultural practice is restricted through a mandatory safety area to protect aquatic organisms, the respective safety area or buffer zone varies from a minimum of 5 m for low-growing crops to 40 m for high-growing or arboreal crops.

It is nevertheless acknowledged, particularly in areas in which plots of agricultural land are mostly small, that it is difficult to comply with the recommended risk mitigation measures.

However, buffer zones, awareness-raising, training and the provision of advice to users in the context of integrated pest management systems are supported by other relevant measures: careful selection of the plant protection products to be used, compliance with conditions laid down on labels, appropriate storage of pesticides, correct preparation of mixtures in appropriate facilities, inspection and calibration of application equipment, preferential use of low-drift application equipment, correct disposal of pesticide packaging and surplus mixtures, and awareness-raising, training and the provision of advice to farmers, pesticide operators and agricultural technicians.

- **Quality of drinking water**

Information on the quality of drinking water is the responsibility of ERSAR [Water and Waste Services Regulatory Authority] (www.ersar.pt). This body publishes the results of the monitoring of drinking water on an annual basis, and the results of monitoring carried out in 2010 are available.

The analysis of data published (ERSAR, 2010) shows that the monitoring of drinking water quality has improved, both in terms of compliance with the mandatory frequency of sampling (very close to 100%) and with parametric values (virtually 98%), and the amount of good quality water has furthermore increased continuously in recent years, this indicator currently applying to 98% of water monitored.

According to ERSAR, the improvements recorded in water quality are enhanced by better controls, reflected in the various stakeholders' growing discipline in monitoring the implementation of legislation (ERSAR, management organisations, health authorities and laboratories), continuous improvements in the reliability of analytical results, performance of

virtually all the analyses imposed by legislation, and technical improvements in water abstraction and the analysis of regulatory parameters, which remain above 97% of the parameters to be tested, including plant protection products.

A total of 28 pesticides, including metabolites and breakdown compounds, are analysed by water management organisations. The pesticides controlled are usually 2,4-D, alachlor, atrazine and desethylatrazine**,** amitrole, bentazone, captan, cymoxanil, chlorpyrifos, chlortoluron, dimethoate, diuron, MPCA, metalaxyl, metribuzin, molinate, propanil, S-metolachlor, tebuconazol, terbuthylazine and desethyl-terbuthylazine, triclopyr, dithiocarbamates and propylene thiourea (a metabolite of propineb). Data for the period from 2009 to 2010 showed that in 2009, out of a universe of 224 samples, infringements were recorded in the established parametric values for dithiocarbamates at levels of 0.6 to 2.0 µg/l in 6 samples (parametric value of 0.5 µg/l for total pesticides), while only one sample presented levels of terbuthylazine of 0.11 µg/l (parametric value of 0.1 µg/l). Out of a total of 184 samples in 2010, infringements of parametric values were detected in 4 samples containing terbuthylazine and desethyl-terbuthylazine, with levels of 0.13 and 0.28 µg/l respectively, and linuron (1 sample) at a level of 0.19 µg/l.

The largest number of non-compliances occurs in the north of the country.

- **Implementation of ecological infrastructure and biodiversity maintenance**

The agricultural landscape has been shaped by human intervention in the form of crop or livestock production activities, which are highly geographically variable and constrained by climatic conditions, terrain and the availability and characteristics of natural resources. This has created a patchwork divided by natural or artificial structures such as hedges, walls and riparian galleries which ensure continuity between the different landscape elements, thus maintaining spaces/habitats with biological or landscape conservation value (vegetation and/or lake) which are important feeding, reproduction and refuge ecosystems for various species of resident and migratory fauna. It is therefore crucial to promote and protect these elements so that any negative impacts of the use of plant protection products are minimised and so that populations of affected organisms can be restored to natural levels over time.

Buffer zones for protecting other non-target organisms such as beneficial arthropods and susceptible plants are also currently recommended when products are being authorised, provided they are technically justified.

- **Agricultural and environmental practices**

Agricultural activity depends *inter alia* on the use and exploitation of natural resources, i.e. soil, water and air. This can have a negative effect on these resources, making the choice of production systems and the associated agricultural practices a key factor in preventing their degradation.

Voluntary soil and water conservation measures for farmers, drawn up in 1999 by the Ministry of Agriculture in the form of a soil and water conservation manual, have been defined in this context.

- **Code of conduct for the application of plant protection products**

The Code of Conduct for the Application of Plant Protection Products, hereinafter referred to

as the ‘Code of Conduct’, was drawn up by the DGAV in accordance with Article 20 of Decree Law No 173/2005 of 21 October 2005 and Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009, which establishes a framework for Community action to achieve the sustainable use of pesticides (currently in the process of publication).

This Code encompasses a range of guidelines or standards of conduct to be adhered to by all public and private stakeholders involved in any way in handling and applying plant protection products so as to ensure public health and environmental protection and the prevention of accidents.

The Code of Conduct should be used in parallel with current legislation on the placing of plant protection products on the market and supplementary legislation, and is intended to represent a standard for applying good plant protection practice and integrated pest management principles.

3.2.7. Handling and storage of plant protection products and management of packaging waste and surpluses

- **Management of packaging waste and surplus plant protection products**

Official data on the management of plant protection product packaging waste are provided by the only organisation licensed for that purpose, SIGERU, Lda, which created VALORFITO, the *Sistema Integrado de Gestão de Embalagens e Resíduos em Agricultura* [Integrated System for the Management of Agricultural Packaging and Packaging Waste].

SIGERU, as the management body for the integrated system, regulated by Decree Law No 366-A/97 of 20 December 1997, as amended, and by Order in Council No 29-B/98 of 15 January 1998, was licensed to manage plant protection product packaging waste from non-urban channels, particularly the agricultural sector.

This undertaking is responsible for the primary packaging waste of plant protection products with a capacity of less than 250 litres, regarded as hazardous according to the European Waste list (Order in Council No 209/2004 of 3 March 2004).

Secondary and tertiary packaging for plant protection and other agricultural products, such as fertilisers, is excluded from this integrated system, under which producers of plant protection products must pay the management organisation a contribution (ECOVALOR), determined by the weight of packaging placed on the market, to fund the management costs associated with such waste.

Packaging waste is brought together in collection centres distributed geographically by agricultural region in accordance with the terms of the licence. Except for the Autonomous Region of Madeira, where VALORFITO has not yet been introduced, the number of collection centres is currently greater than the number required under the SIGERU licence: at the end of 2012 the total number of active collection points stood at 682.

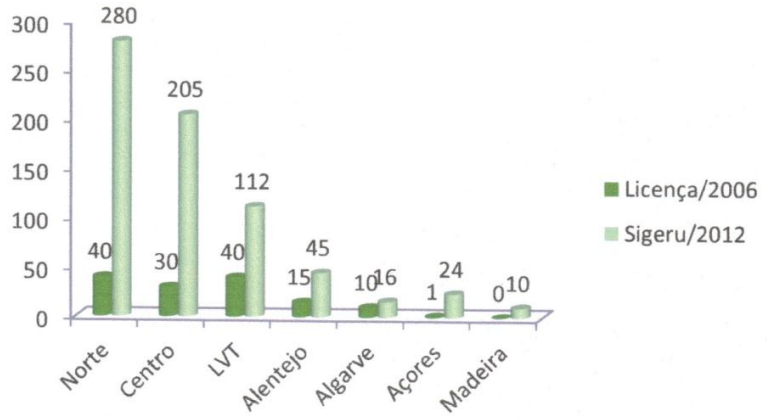
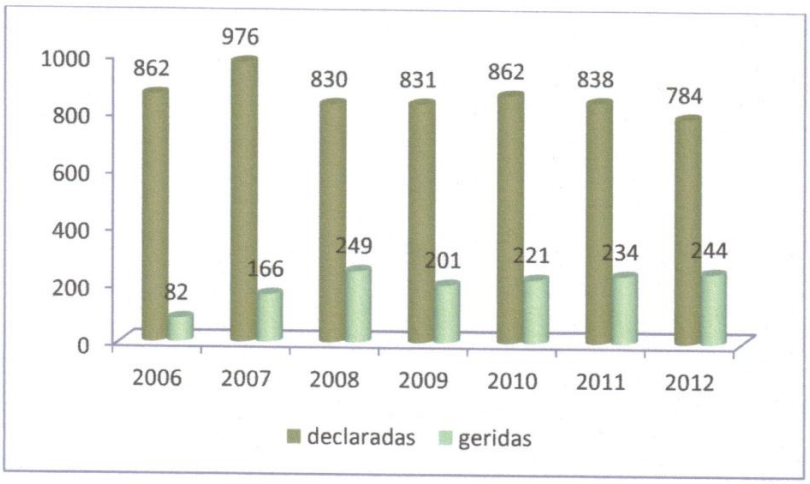


Fig. 3.2.4 – No of active collection centres at end-2012 and minimums per Agricultural Region established in the licence issued in 2006 (SIGERU/VALORFITO)

Over 95% of the total weight of packaging received in collection centres is made up of items with a capacity equal to or greater than one litre. These data were collected by VALORFITO (Murta, 2010) through surveys carried out in 2010 involving 1 500 people who visited points of sale to purchase products and/or hand over packaging waste.

On the basis of information provided by VALORFITO in its annual activity reports, the figure below shows the quantities of packaging declared and packaging waste managed by this management body.

Since the system was introduced in 2006, the quantity of waste collected doubled from 2006 to 2007, increased by 50% from 2007 to 2008 and fell by 19% from 2008 to 2009. In 2010 there was an increase of 10% compared to 2009, followed by an increase of 5% from 2010 to 2011, corresponding to a collection rate of 28% (VALORFITO, António Lopes Dias, staff committee). Data for 2012 point to a 6.2% fall in packaging declared compared to 2011. The management organisation estimates, however, that VALORFITO should rise by 3% to over 240 tonnes under management, the collection rate rising to around 31%. The quantity of packaging placed on the market has also remained largely constant over the years, with a peak only in 2007. All this waste was sent for recycling.



declaradas	declared
geridas	managed

Fig. 3.2.5 – Quantities of packaging declared and packaging waste managed by the licensed management system between 2006 and 2011 (SIGERU/VALORFITO)

- **Storage of plant protection products on agricultural holdings**

Correct plant protection product storage and appropriate stock management helps to reduce the risk of accidents involving these products and the amount of obsolete product waste on holdings, which has high potential for environmental contamination. Since the implementation of Decree Law No 173/2005, which created the legal basis and technical framework for the appropriate management of plant protection products on agricultural holdings, voluntary technical guidelines have been introduced on their correct storage on holdings.

In the context of the mandatory measures to be observed, regulated by the scheme for monitoring cross-compliance, the requirement to monitor the indicator of plant protection product storage on holdings is mandatory and triggers penalties if not complied with.

Farmers' attitudes and conduct in relation to the appropriate storage of products on the holding have therefore generally developed positively.

IFAP figures in this area demonstrate a non-compliance rate for this indicator of 1.06% in 2009, 0.29% in 2010 and 0.43% in 2011.

3.2.8. Sustainable production and protection

Developments in integrated pest management, integrated production and organic production in Portugal, contrary to other European countries, was slow during the 1980s and early 1990s, while in 1994, the year of implementation of Regulation (EEC) No 2078/92 of 30 June 1992, there were only three farmers' organisations (AAIPM[1], APAS[2] and AVAPI[3]) providing

[1] Associação de Agricultores para Produção Integrada de Frutos de Montanha.
[2] Associação dos Productores Agrícolas de Sobrena.
[3] Associação para a Valoração Agrícola em Produção Integrada.

advice to farmers on implementing integrated pest management. These organisations covered an area of around 300 ha of pome fruit cultivation.

The implementation of the measures in groups I and IV of the above Regulation did much to encourage the start-up of integrated pest management, integrated production and organic production at national level. The purpose of the group I measures was to reduce the polluting effects of agriculture by awarding aid to farmers who sought to pursue such practices, while the group IV measures enabled demonstration fields to be developed and specific training to be provided on this protection method.

The approval of Regulation (EEC) No 2078/92, Agro-environmental Measures, introduced the requirement to establish standards for engaging in integrated pest management and production in Portugal.

A legislative framework was drawn up in this respect which included Decree Law No 180/95 of 26 July 1995 and supplementary legislation, subsequently consolidated by legislation on the approval of technicians for organic production and giving rise to Decree Law No 256/2009 of 24 September 2009, as amended by Decree Law No 37/2013 of 13 March 2013.

As provided for in the above legislation, documents supporting the pursuit of integrated pest management and production were drawn up, i.e.:

- lists of plant protection products recommended in integrated pest management;
- lists of economic damage thresholds to be identified in integrated pest management;
- record books to be used in integrated pest management and production;
- fertilisation plans and cultivation practices for various crops.

According to the prevailing legislation, until 2007 farmers had to be members of a farmers' organisation recognised in the area of integrated pest management and production and had to undergo training in that field in the first year of membership to be able to engage in these activities. The farmers' organisation was responsible for contracting approved technicians to provide its members with technical assistance throughout the growing cycle.

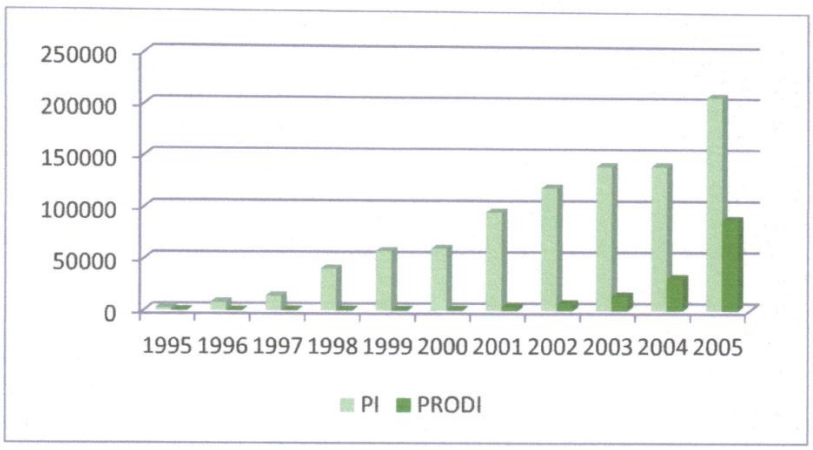
In late 2007 some 150 farmers' organisations employing around 550 technicians approved to provide technical assistance in integrated pest management and/or integrated production for various crops were recognised (Table 3.2.6). Vines attracted the greatest number of farmers, 44.5% in integrated pest management and 39.7% in integrated production, apparently due to the size and significance of this crop in Portugal.

Table 3.2.4 – Crops under integrated pest management (IPM) and integrated production (IP) in 2007

Crop	IPM	IP
Avocado	√	√
Actinidia	----	√
Rice, maize and autumn/winter cereals	√	√
Citrus fruit	√	√
Fig and nuts	√	----
Fruiting vegetables	√	√
Oil fruits	√	----
Olives	√	√
Grazing and forage	----	√
Pome fruits	√	√
Stone fruit	√	√
Sorghum	----	√
Vines	√	√

In 2005, when new applications were still being recorded, the 150 recognised farmers' organisations provided technical assistance over a total area of around 300 000 ha, some 208 000 ha of which were under integrated pest management and 88 000 ha under integrated production (Fig. 3.2.6).

Because the number of farmers involved in integrated pest management had risen exponentially, many specialists considered its implementation to be successful.



PI	IPM
PRODI	IP

Fig. 3.2.6 – Annual development of areas under integrated pest management and integrated production, 1995-2005

The approval of Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by EAFRD and the adoption of the Community strategic guidelines defined in Decision 2006/144/EC of 20 February 2006 provided the framework for the national rural development programme for 2007 to 2013.

Portugal drew up its **National Strategic Plan** (NSP) for agriculture and rural development on the basis of Community strategic guidelines. The purpose of the plan was to 'promote the sustainable competitiveness of the agroforestry sector and rural areas'.

New rules were introduced to implement the NSP, a considerable decrease being recorded in

the number of parties involved in integrated pest management and integrated crop production (farmers' and technicians' organisations). This appeared to be due on the one hand to the fact that integrated pest management was no longer eligible for financial support, and on the other to the fact that farmers no longer had to belong to the recognised organisations, having the option to engage in integrated production (the only system granted financial support) with or without technical support. This was demotivating for farmers because it was difficult for them to comply with the requirements of this production method.

Out of the 150 farmers' organisations existing in 2007, only around 20% are currently in operation, mainly in the Lisboa e Vale do Tejo and Centre regions, providing technical assistance on the integrated production of vegetables, pome fruit, stone fruit and vines.

According to IFAP data, based on applications to PRODER – Agro-environmental Measures – Alteration of Agricultural Production Methods, areas applying for the IP Measure – Integrated Production – were as follows from 2008 to 2012 (unit: 000 ha):

Table 3.2.5 – Areas applying for the IP Measure – Integrated Production

2008	2009	2010	2011	2012
104.4	221.3	310.2	363.3	362.1

Recognition of technicians for providing technical assistance in integrated pest management, integrated production and organic production continued to be ensured by the DGADR, and an official database existed of technicians who were recognised to have skills in providing technical support in these fields, albeit on an optional basis. This database is published on the DGADR website, around 200 technicians currently being recognised for providing technical support in integrated pest management and integrated production (plants) and 130 in organic production.

IV. Glossary

EFSA – European Food Safety Authority

APA – Agência Portuguesa do Ambiente, I.P. [Portuguese Environment Agency]

ASAE – Autoridade de Segurança Alimentar e Económica [Food Safety and Economic Security Authority]

CIPP – Centro de Inspeção Periódica obrigatória de equipamentos de aplicação de Produtos fitofarmacêuticos [Centre for the Mandatory Periodic Inspection of plant protection product application equipment]

DGADR – Direção-Geral de Agricultura e Desenvolvimento Rural [Directorate General for Agriculture and Rural Development]

DGAV – Direção-Geral de Alimentação e Veterinária [Directorate General for Food and Veterinary Affairs]

DGS – Direção-Geral de Saúde [Directorate General for Health]

DRAPs – Direções Regionais de Agricultura e Pescas [Regional Agriculture and Fisheries Directorates]

PPE – Personal Protective Equipment

ERSAR – Entidade Reguladora de Sistemas de Águas e Resíduos [Waste Disposal and Water Distribution Regulatory Authority]

FAQ – Frequently Asked Questions

FNAP – Federação Nacional dos Apicultores de Portugal [National Federation of Portuguese Beekeepers]

GPP – Gabinete de Planeamento e Políticas [Planning and Policy Bureau]

IFAP – Instituto de Financiamento da Agricultura e Pescas, I.P. [Agriculture and Fisheries Financing Institute]

INAC – Instituto Nacional de Aviação Civil, I.P. [National Institute of Civil Aviation]

INE – Instituto Nacional de Estatística, I.P. [National Statistics Institute]

INIAV – Instituto Nacional de Investigação Agrária e Veterinária, I.P. [National Agricultural and Veterinary Research Institute]

MRL – Maximum Residue Levels

OP – Organic Production

EDA – Economic Damage Threshold

QS – Quality Standard

EQS – Environmental Quality Standard

CAP – Common Agricultural Policy

NAP – National Action Plan

PPP – Plant Protection Product

IPM – Integrated Pest Management

NRCP – National Residue Control Plan

IP – Integrated Production

AR – Autonomous Region (Madeira and the Azores)

MR – Mutual Recognition

Y/N – Yes/No

SAA – Serviço de Aconselhamento Agrícola [Agricultural Advisory Service]

SNAA – Serviço Nacional de Avisos Agrícolas [National Agricultural Information Service]

VALORFITO/SIGERU – Sistema Integrado de Gestão de Embalagens e Resíduos em Agricultura, Lda. [Integrated System for the Management of Agricultural Packaging and Waste]