



Deliverable 4
Manual on Good Agricultural
Practices of involved countries
and national and EU legislation



This publication has been produced with the financial support of the Leonardo Da Vinci Programme – Partnerships of the European Commission. The contents are the sole responsibility of GAP4D project partners and can in way be taken to reflect the views of the European Commission.





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GOOD AGRICULTURAL PRACTICES: A GENERIC MODEL

A. INTRODUCTION

The links between the natural environment and farming practices are complex. Many valuable habitats are maintained by extensive farming and a wide range of wild species rely on this for their survival. But inappropriate agricultural practices and land use can also have an adverse impact on natural resources like pollution of soil, water and air, fragmentation of habitats and loss of wildlife.

Farmers stand to gain from protecting the environment because it is in their fundamental economic interest to conserve natural resources for the future. It makes more economic sense to take account of nature conservation from the outset than to have to repair any damage after it has been done. The environment benefits from farmers' stewardship as the landscape is maintained and the ecological balance required by wildlife is safeguarded.

Good farming practice is common-sense farming which cares for the environment and meets minimum hygiene and animal welfare standards. Good farming practice also involves complying with the law on the environment, hygiene, animal welfare, animal identification and registration and animal health.

Good Agricultural Practices approaches apply recommendations for the on-farm segment of agricultural product chains and post-harvest processes resulting in safe and healthy food and non-food agricultural products. Recently, the term Good Agricultural Practice

can refer to any collection of specific methods, which, when applied to agriculture, produce results that are in harmony with the values of the proponents of those practices. Because of that, there are numerous competing definitions of what methods constitute "Good Agricultural Practices", so whether a practice can be considered "good" will depend on the standards a farmer is applying. Consequently, the term is used to refer to practices that are being developed and applied in a number of forms by governments, civil society organizations and the private sector to meet farmers' and consumers' needs and specific requirements in the product chain.



FAO Definition of Good Agricultural Practices (GAPs)

GAPs are a collection of principles to apply for on-farm production and post-production processes, resulting in safe and healthy food and non-food agricultural products, while taking into account economical, social and environmental sustainability. GAPs may be applied to a wide range of farming systems and at different scales. They are applied through sustainable agricultural methods, such as integrated pest management, integrated fertilizer management and conservation agriculture.

General principles applied to GAPs

- Economically and efficiently production of sufficient (food security), safe (food safety) and nutritious food (food quality)
- Sustainability and enhancement of natural resources



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- Maintaining viable farming enterprises and contributing to sustainable livelihoods
- Meeting cultural and social demands of society

Who benefit from the GAPs?

- Farmers and their families will obtain healthy and good quality food generating a value added in their products to access markets in a better way
- Consumers will enjoy better and safer foods through sustainable production
- The population, in general, will benefit from a better environment

Agriculture & Environment in the EU

Half of the EU's land is farmed. This fact alone highlights the importance of farming for the EU's natural environment. By shaping the landscape, agriculture has differentiated it. There is a variety of landscapes in Europe, each of which has cultural importance. Aesthetic values attaches to these cultivated landscapes with all their traditional features, including buildings, field boundaries and water courses.

Both the establishment and evolution of EU agricultural and environmental policies and their interrelations have to be considered in the context of the history of European construction. Integration of environmental goals into agricultural policy began in the 1980s. Since then the CAP has been increasingly adapted to sustainability goals. The CAP's objectives include helping

agriculture to fulfil its multifunctional role in society: producing safe and healthy food, contributing to sustainable development of rural areas, and protecting and enhancing the status of the farmed environment and its biodiversity.

Since 2003, the concept of GAPs is being implemented in EU policies and legislations following the so called CAP reform (Common Agricultural Policy). Basically, the CAP reform is geared towards the framework of GAPs of the FAO. The vision of common agricultural practice policy is starting to being realized by the political instrument of compulsory cross compliance. In parallel the EU tries to help the environment by offering financial assistance to encourage change by, for example, reducing the numbers of animals per hectare of land, leaving field boundaries uncultivated, creating ponds or other features, or by planting trees and hedges and so going beyond conventional good farming methods, helping with the cost of nature conservation, insisting that farmers must respect environmental laws (and laws on public, animal and plant health) and look after their land properly if they wish to qualify for direct income payments.

Developments in the CAP have occurred not only because of changes in farming, but also in response to the demands of society as a whole. These include the increasing concern about food hygiene and safety and animal welfare.

More specifically, since 2005, all European farmers receiving direct payments are subject to compulsory **Cross Compliance**, which includes:



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(a) Statutory Management Requirements

19 legislative standards in the field of the environment, food safety, animal and plant health and animal welfare

(b) Good agricultural and environmental condition requirements

Standards related to soil protection, maintenance of soil organic matter and structure, avoidance of the deterioration of habitats, retention of landscape features and water management

EU Cross Compliance Legislation refers mainly to:

- Council Regulation (EC) No 73/2009 of 19 January 2009 establishing common rules for direct support schemes for farmers under the common agricultural policy and establishing certain support schemes for farmers, amending Regulations (EC) No 1290/2005, (EC) No 247/2006, (EC) No 378/2007 and repealing Regulation (EC) No 1782/2003
- Commission Regulation (EC) No 1122/2009 of 30 November 2009 laying down detailed rules for the implementation of Council Regulation (EC) No 73/2009 as regards cross-compliance, modulation and the integrated administration and control system, under the direct support schemes for farmers provided for that Regulation, as well as for the implementation of Council Regulation (EC) No 1234/2007 as regards cross-compliance

B. OBJECTIVES & METHODOLOGY

The GAPs are a set of rules containing advice and recommendations on farm practices that are beneficial to the environment and whose application helps maintain a balance

between agricultural functions and environmental protection. Our aim is to examine the degree to which GAPs, as set by the competent administrations of selected countries, are applied and seen as a response to the environmental concerns that exist at the interface between agriculture and environment. Furthermore we will attempt to see whether these measures are meaningful to, and hence applied by farmers.

Respondents are primarily asked to identify, based on existing literature and expert contacts, the main environmental problems caused by agricultural activities focusing on specific issues and secondly to describe how GAPs respond to these challenges in their country.

Members of the GAP4D network are asked to provide their expert opinion on selected key issues by responding to a questionnaire, and comment based on their expertise and experience gained during the implementation in their respective countries.

C. SELECTED ISSUES & GAPs

Production guidelines and recommendations to farmers under the headlines of GAPs are generally organized following the sequence of activities and choices in the production process, such as:

- Crop rotation considerations (the choice of what to produce and when)
- Land preparation; tillage
- Plant nutrient requirements; fertilizer kinds and amounts
- Crop establishment methods; planting density, arrangement etc.



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- Weed control
- Pest and disease control, with IPM principles in some cases
- Water management and irrigation
- Harvest methods
- Livestock rations and feeding systems
- On-farm storage methods, etc.

In order to better examine the implementation of GAPs in the four countries that participate in the GAP4D project, few management practices have been selected as being representative indicators of the policies applied in the countries. These farm management practices deal with the three most important elements of farm management as follows:

1. Soil management
2. Protection of environment and maintenance of landscape features
3. Water management

D. SOIL MANAGEMENT

Objectives

- protection from erosion
- improvement of soil fertility
- maintenance of soil structure and organic matter
- reduction of problems from weeds and diseases
- proper management of fertilizers and nutrients

Soil management practices

- land preparation and tillage according to crop and farmyard features (i.e. slope, soil compaction through rutting)
- appropriate crop establishment methods; planting density, arrangement
- crop rotation
- application of fertilizers according to specific crop nutrient requirements
- control of invasive species and noxious weeds
- appropriate harvested crop handling and use of machinery and equipment

E. PROTECTION OF THE ENVIRONMENT & MAINTENANCE OF LANDSCAPE FEATURES

Objectives

- conservation, maintenance or re-establishment of sufficient habitat diversity supporting several species
- conservation of wildlife and threatened species
- management of holdings in “Natura 2000” sites
- management of holdings in Nitrate Vulnerable Zones
- retention of landscape features

Protection of the environment & maintenance of landscape features practices

- diversification and/or rotation of crops to increase localised habitat heterogeneity
- use of appropriate cultivation practices supporting agricultural biodiversity (i.e. management of residues of cultivation)



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- maintenance of hedgerows, buffer strips and non cultivated areas in the borders of the parcels
- integrated use of crop protection products
- implementation of Management Plans in “Natura 2000” sites or specific fertilizer protocols in Nitrate Vulnerable Zones
- preservation of landscape and its features such as ditches, dry walls, ponds and woods

F. WATER MANAGEMENT

Objectives

- proper irrigation water management
- water quality and quantity monitoring in order to ensure the good qualitative and quantitative status for water resources
- avoidance of water intrusion in aquifers
- reduction of water pollution from agricultural practices
- achievement of good ecological status of water bodies

Water management practices

- integrated water management by using the proper irrigation system per crop
- rational, and under control, use and application of plant-protection products (pesticides, fertilizers, chemicals)
- modernization of the irrigation network
- irrigation water costing per cubic meter consumption

How water should be used and managed?

How should water and irrigation be implemented?

G. DATA COLLECTION

Agriculture may have damaging as well as beneficial effects on the environment. Both aspects have to be considered in order to understand the shortcomings but also the potential of farming activities vis-à-vis the environment.

SOIL MANAGEMENT

a/a	Issue	Practice	GR	CY	TU	LI
1	Soil erosion	(a) Minimum soil cover				
		(b) Minimum land management				
		(c) Maintenance of terraces				
2	Soil organic matter	(a) Crop rotation				
		(b) Arable stubble management				
3	Soil structure	(a) Machinery use				
4	Soil contamination	(a) Nutrients management				
		(b) Organic material handling				

<u>Remarks:</u>	
GAPs implementation:	✓ : poor ✓✓ : average ✓✓✓ : high
Data source:	
Date:	

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Examples

1(a) Areas with steep slopes should have plant cover during winter period or should be ploughed following the contour

2(a) Crop rotation pattern such as yearly cultivation of at least three crops of arable land or suitable break crops

2(b) Burning of stubbles and other crop residuals in some countries and in some cases is prohibited. Instead residuals should be incorporated into the ground or grazed by livestock

4(a) The main sources of agricultural nitrates are organic fertilisers such as animal manures and slurries, silage effluent, dairy washings, soiled water and mushroom compost, and also chemical fertilisers containing nitrogen. Other non-agricultural materials that are used to promote pasture and crop production. Examples of such materials are sewage sludge, industrial wastes and residues from fish farms.

Nutrient Management: It is wasteful and environmentally damaging to apply more nutrients than necessary, particularly too much nitrogen and phosphorus. Farmers must be aware of and comply with their responsibilities under the law.

4(b) Farmers should collect and store organic material (slurry, farmyard manure, manure, soiled water, poultry manure, dairy washings, silage effluent, non-farm organic waste, sewage sludge) and other waste such as farm chemicals, oils and industrial waste

and residues in a manner that is not liable to cause pollution and maintain adequate waste storage facilities.

PROTECTION OF THE ENVIRONMENT & MAINTENANCE OF LANDSCAPE FEATURES

a/a	Issue	Practice	GR	CY	TU	LI
1	Biodiversity preservation	(a) Maintenance of wildlife habitats				
		(b) Cultivation practices supporting agricultural biodiversity (crop rotation, diversification etc.)				
		(c) maintenance of hedgerows, ditches, buffer strips and non cultivated areas				
2	Environment I deterioration	(a) Integrated use and handling of agrochemicals				
		(b) Integrated Production Management				
		(c) Management of holdings in Nitrate Vulnerable Zones				
3	Landscape maintenance features	(a) Preservation of terraces and dry walls				

Remarks:
 GAPs implementation: ✓ : poor
 ✓✓ : average
 ✓✓✓ : high
 Data source:
 Date:

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Examples

1(a) Maintenance of wildlife habitats through designation of Special Areas of Conservation (SACs) and Special Protected Areas (SPAs) and management of NATURA 2000 network according to Habitat Regulation 92/43/EEC and Birds Regulation 79/409/EEC

2(a) once a pesticide or agrochemical has been purchased, it is the owner’s responsibility to see that it is kept safely until used. Pesticides (including herbicides, fungicides, insecticides, and wood preservatives) should be stored securely and handled and used in accordance with label instructions. Fertilisers and oil should be stored a safe distance from produce destined for human consumption and animal feeding stuffs.

Storage and use of agrochemicals according to legal regulations for individual crops, rates, timing and pre-harvest intervals and assure that they are only applied by trained and knowledgeable person. Equipment used for the handling and application of agrochemicals complies with established safety and maintenance standards. Application of pest and disease forecasting technique, where applicable.

2(c) Comply with action plans and fertilizers protocol applicable to Nitrate Vulnerable Zones when these are designated. Directive 91/676/EEC from 12.12.1991 refers to the protection of waters against pollution caused by nitrates from agriculture. This aims to prevent high concentrations of nitrates in water by limiting the polluting effects of intensive agricultural production and by reducing the use of chemical fertilisers.

3(a) Terraces and dry walls should not be interfered with through activities such as excavation, construction of buildings, or afforestation. No material of any type should be removed from or dumped on such sites.

WATER MANAGEMENT

a/a	Issue	Practice	GR	CY	TU	LI
1		(a)				
		(b)				

Remarks:
 GAPs implementation: ✓ : poor
 ✓✓ : average
 ✓✓✓ : high
 Data source:
 Date:



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