

Pesticides

Code of practice for using plant protection products

This code of practice has been prepared jointly by the Department for Environment, Food and Rural Affairs (Defra), the Health and Safety Commission (HSC) and the National Assembly for Wales Environment, Planning and Countryside Department.



Agriculture



Amenity



Horticulture



Forestry



Llywodraeth Cynulliad Cymru
Welsh Assembly Government



This code is also available on the PSD website
(www.pesticides.gov.uk/farmers_growers_home.asp#Codes_of_Practice)
and on the Defra website (www.defra.gov.uk/)

A Welsh language version of this code is available on the NAW website ([//www.wales.gov.uk/](http://www.wales.gov.uk/)).
Printed copies of the Welsh language version are available from:

Plant Health and Biotechnology Branch
Animal and Plant Health Division
Welsh Assembly Government
Department for Environment, Planning and
Countryside
Cathays Park
Cardiff CF10 3NQ

Biotechnoleg a Iechyd Phlanhigion
Is-Adran Polisi Iechyd Anifeiliaid a Phlanhigion
Llywodraeth Cynulliad Cymru
Adran yr Amgylchedd, Cynllunio a
Chefn Gwlad
Parc Cathays
Caerdydd CF10 3NQ

As a Scottish version of this code (approved by the Scottish Parliament) is being produced, this code is for
England and Wales only. The Scottish version of the code will be available on the Scottish Executive website.
Printed copies of the Scottish version will be available from:

APPP
Scottish Executive Environment and Rural Affairs Department
Pentland House, 47 Robb's Loan
Edinburgh EH14 1TY.
Phone: 0131 244 6356
E-mail: app@scotland.gsi.gov.uk

Northern Ireland will produce their own updated version of this code in due course.

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone 020 7238 6000
Website: www.defra.gov.uk

© Crown copyright 2006

The text in this document (excluding the Royal Arms and departmental logos) may be reproduced free of
charge in any format or medium provided that it is reproduced accurately and not used in a misleading
context. The material must be acknowledged as Crown copyright and the title of the document specified.

Any enquiries relating to the copyright in this document should be addressed to

The Information Policy Team, Office of Public Sector Information,
St Clements House, 2-16 Colegate, Norwich, NR3 1BQ.
Fax: 01603 723000 or e-mail: OPSlicensing@cabinet-office.x.gsi.gov.uk

Further copies of this publication are available from:

Defra Publications
Admail 6000
London
SW1A 2XX
Tel: 08459 55600



This document is also available on the Defra website

Published by the Department for Environment, Food and Rural Affairs. Printed in the UK, January 2006, on
material that contains 100% recycled fibre for uncoated paper and a minimum of 75% recycled fibre for
coated paper.

Product code PB 11090

Pesticides

Code of practice for using plant
protection products

January 2006

Contents

Part A	Emergency procedures	8
	A1 Action plans	8
	A2 Personal contamination	8
	A3 Dealing with spillage	9
	A4 Suspected animal poisoning	10
	A5 Fire	10
Part B	Foreword	11
Part C	Notices	12
	C1 General notice under both the Food and Environment Protection Act 1985 and Health and Safety at Work etc Act 1974	12
	C2 Notice of issuing this code under section 17 of the Food and Environment Protection Act 1985	12
	C3 Notice of this code being approved by the Health and Safety Commission under section 16 of the Health and Safety at Work etc Act 1974	13
	C4 Notice of this code being approved under regulation 21 of the Groundwater Regulations 1998	14
Section 1	Introduction	15
	1.1 How do I decide if it is necessary to use a pesticide?	15
	1.2 What advice is given in this code?	15
	1.3 What does this code cover?	16
	1.4 What is the legal status of this code?	17
	1.5 Who should read this code?	18
	1.6 What other advice is available?	18
	1.7 Special terms	18
Section 2	Training and certification	19
	2.1 Who must be trained in using pesticides?	19
	2.2 What training do I need?	20
	2.3 When would I need a certificate of competence?	21
	2.4 How can I use pesticides without a certificate of competence?	24
	2.5 Where do I get certificates of competence?	24
	2.6 What training and certificates are needed for salespeople, advisers, managers and people who draft contracts?	25
	2.7 Continuing professional development (CPD)	26
Section 3	Planning and preparation	27
	3.1 Making the risk of using pesticides as low as possible	27
	3.1.1 Considering whether to use a pesticide	27
	3.1.2 What to do if you decide that you need to use a pesticide	28
	3.1.3 Choosing the right pesticide	29
	3.2 The product label	30
	3.2.2 Other information	30
	3.2.3 Checking the approval	31
	3.2.4 The label	31
	3.2.5 Off-label approvals	33
	3.2.6 Treated seeds, cuttings and so on	33
	3.2.7 Applying a pre-prepared pesticide	33

3.3 Storing pesticides	33
3.3.2 How should I store pesticides?	34
3.3.3 What extra conditions apply to mobile stores?	35
3.3.4 Moving pesticides into and out of the store	36
3.3.5 Do not leave pesticide containers unattended	36
3.4 The COSHH assessment	37
3.4.1 When do COSHH regulations apply?	37
3.4.2 When is an assessment suitable and sufficient?	37
3.4.3 Finding out about the dangers	38
3.4.4 Assessing the risks, who might be harmed and how?	39
3.4.5 Deciding what needs to be done to control exposure	40
3.4.6 Recording the assessment	41
3.4.7 Reviewing the assessment	41
3.5 Preventing people being exposed to pesticides at work	42
3.5.2 How can exposure be prevented or adequately controlled?	42
3.5.3 Measures for preventing exposure to pesticides	42
3.5.4 Measures for controlling exposure to pesticides	43
3.5.5 Using personal protective equipment (PPE)	44
3.5.6 Suitable personal protection equipment	45
3.5.7 Maintaining control measures	47
3.5.8 Welfare facilities	48
3.5.9 What you need to do	48
3.6 Monitoring exposure and health surveillance	49
3.6.1 When is it necessary to monitor exposure to pesticides?	49
3.6.2 What is health surveillance?	50
3.6.3 When is health surveillance necessary?	50
3.6.4 What else do employers need to do?	51
3.6.5 What about sudden illness?	51
3.7 Protecting the public	52
3.7.1 Neighbouring property	53
3.7.2 When must notice be given?	54
3.7.3 Giving notice to bystanders and occupiers of neighbouring property	54
3.7.4 Public rights of way	56
3.7.5 Who should I tell if there is an incident involving pesticides?	57
3.7.6 Further information	57
3.8 Protecting wildlife and the environment	58
3.8.1 Assessing possible negative effects	58
3.8.2 How can wildlife and plants be protected?	58
3.8.3 Specially designated areas	60
3.8.4 How can wild birds and mammals be protected?	61
3.8.5 How can bees be protected?	61
3.8.6 Other beneficial species	62
3.8.7 Livestock	62
3.8.8 Fish and other aquatic life	62
3.8.9 Wildlife incident investigation scheme (WIIS)	64

3.8.10 Preventing pesticides from contaminating surface water and groundwater	64
3.8.11 Controlling weeds in or near water	68
3.8.12 Applying pesticides from an aircraft	68
3.8.13 Invasive weeds	69
Section 4 Working with pesticides	70
4.2 Preparing to apply pesticides	70
4.2.1 Checks to carry out	71
4.2.2 Dangerous practices	72
4.3 Handling pesticide containers	72
4.4 Transporting pesticides	73
4.4.1 The law	73
4.4.2 General precautions when transporting pesticides	73
4.4.3 Transporting pesticides inside a vehicle	74
4.4.4 Loading and unloading pesticides	75
4.4.5 Further action	75
4.5 Filling equipment	75
4.5.1 Where should I fill the equipment used to apply pesticides?	75
4.5.2 What precautions should I take when filling equipment?	76
4.6 Methods of applying pesticides	79
4.6.1 Choosing a method	79
4.6.2 How you should apply the pesticide to the area to be treated	80
4.6.3 Which application methods need special precautions?	80
4.6.4 Ground-based reduced-volume spraying	80
4.6.5 Fogs, mists and smokes in enclosed spaces	81
4.6.6 Fumigants	82
4.6.7 Dusts, granules, pellets and baits	83
4.6.8 Using vehicles without cabs	84
4.6.9 Paved areas and public footpaths	84
4.6.10 Using hand-held equipment	85
4.6.11 Seed treatments	86
4.6.12 Dipping and drenching treatments	86
4.6.13 Weed control in or near water	87
4.6.14 Applying pesticides from an aircraft	88
4.7 Spray drift	88
4.7.1 The effects of spray drift	88
4.7.2 What causes spray drift?	89
4.7.3 Weather conditions	89
4.7.4 How can off-target drift be prevented or controlled?	91
4.8 After working with pesticides	92
4.8.1 What you need to do after you have applied a pesticide	92

Contents

Section 5 Disposing of pesticide waste	93
5.2 Change to the law for farmers and growers	93
5.3 How to reduce the amount of waste you produce	93
5.4 How to dispose of unwanted pesticide concentrates and ready to use formulations	94
5.5 How to dispose of dilute pesticide waste	95
5.6 How to dispose of waste pesticide containers	97
5.7 How to dispose of other pesticide waste materials	99
5.8 Where you can get more information	100
Section 6 Keeping records	101
6.2 Storage records	101
6.3 Records of pesticide treatments	102
6.4 COSHH assessment records	103
6.5 Records of environmental risk assessments	104
6.6 Records of monitoring exposure	105
6.7 Maintenance records of exposure control measures	105
6.8 Health surveillance records	106
6.9 Disposal records	106
Annex A Laws referred to in this code	109
Annex B Bibliography	119
Annex C Glossary of terms used in this code	126
Glossary 1 This glossary defines words used in this code	126
Glossary 2 The definitions in glossary 2 relate to equipment and methods of applying pesticides. They are loosely based on the NPTC assessment schedules for certificates of competence in using pesticides safely	131
Annex D Addresses	134
Annex E Guidance on using personal protective equipment	138
Annex F Record sheet for pesticide treatments	142
Annex G Applying pesticides from an aircraft	144
Annex H Things to consider when preparing and managing contracts for applying pesticides in amenity areas	146
Annex I Things to consider when using pesticides in high-security or high-risk amenity and industrial areas	152
Index	154
Contributors of photographs	167

List of tables and decision trees

Table 1	This code covers everything listed below	16–17
Table 2	Subjects you need to know about (training)	20–21
Flow chart 1	Is a certificate needed for the product I plan to use?	22
Flow chart 2	Do I need a certificate?	23
Table 3	Measures for protecting bees	62
Table 4	Options for dealing with drainage and run-off from dedicated mixing and loading areas	66
Table 5	Action when filling equipment	76–78
Table 6	A guide to wind speed and the use of field crop sprayers with conventional nozzles	90
Table 7	Summary of records to be kept	107–108

Emergency procedures

A1 Action plans

Anyone who uses pesticides professionally (that is, as part of their job) must be trained in emergency procedures and must have, and understand, their own action plans. These emergency action plans should be kept up to date to cover new equipment or new ways of working. Many product labels will have specific advice on what to do if you are contaminated or there is a spillage or fire. This information is always on the manufacturer's material safety data sheet (MSDS), which you can get when you buy the product.

A2 Personal contamination

You can be exposed to pesticides through your skin (usually the main route of exposure) and eyes, by breathing them in or by swallowing them. Your emergency action plan should consider how to protect the environment when you are dealing with any exposure or spillage.

If you, or people you are working with or nearby, feel unwell when you are using pesticides, or after you have used them, you should do the following:

- Stop work and, if necessary, call for medical help immediately.
- Prevent further exposure. Use appropriate personal protective equipment when helping a contaminated person or handling contaminated surfaces.
- Move the casualty away from the source of contamination and remove all their contaminated clothing.
- Wash contaminated skin or hair thoroughly with plenty of clean water.
- If eyes are contaminated, immediately flush them with plenty of clean running water. Then cover the eye with a sterile eye pad or similar lint-free dressing.
- If someone has swallowed a pesticide, do not try to make them vomit (be sick) unless the product label recommends this.
- Make the casualty rest and keep them warm.
- If the casualty is unconscious, check their breathing and pulse and put them in the recovery position. If there are no signs of breathing or a pulse, begin CPR (cardiopulmonary resuscitation), if necessary, using a method of artificial respiration which will avoid the risk of you swallowing or breathing in the pesticide.
- Give the doctor or hospital a copy of the product labels and material safety data sheets. If this is not possible, give them details of the active ingredients and the product names.
- Make sure you or someone else reports the incident to your nearest Health and Safety Executive (HSE) office. The address and phone number will be in The Phone Book or you can phone the HSE 'Info line' on 08701 545500. For out-of-hours emergencies, phone the HSE on 0151 9229235.

A3 Dealing with spillage

You can keep the negative effect a pesticide spillage has on the environment as low as possible by carrying an appropriate 'spill kit' and knowing how to use it. You must never hose down spilt pesticide or allow it to enter surface water, ditches, drains or soakaways. It is good practice to have a diagram of your drainage systems available for emergencies.

If you spill any pesticide as a concentrate, ready-to-use product or spray solution, no matter how small the spill is, you should do the following:

- Keep people and animals away from the affected area until the situation has been dealt with.
- Avoid becoming contaminated yourself. Wear appropriate personal protective equipment.
- Immediately prevent further spillage using, for example, an emergency folding pool.
- Contain the spilt material. As a priority, keep the contamination away from surface water, ditches and drains.
- Tell the Environment Agency (phone 0800 807060) and warn others at risk if the spill:
 - contaminates any water;
 - could contaminate water later, either directly or through a drainage system; or
 - contaminates a large amount of soil.
- You may need to tell neighbours or people using the water downstream of the spill.
- Tell the local water company if the spill enters a sewage system.
- For spilt liquids, put absorbent material, such as cat litter or dry sand, around the spill and use the same material to soak up the spillage. The material you use must be 'inert'. This means it must not cause any chemical reaction.
- Sweep up any solids and material used to contain liquid spills. Sweep up as gently as possible without raising dust. Then sprinkle the area with inert absorbent material and sweep gently again.
- For leaking containers, do one of the following:
 - Use the contents immediately.
 - Pour the contents of the damaged container into an empty container that originally held the same product. The container should be in good condition and with an undamaged label.
 - Put the leaking container into a suitable larger container clearly labelled with the product name and the hazard classification and risk and safety phrases shown on the product label.
- Never put any pesticides into an empty food or drink container.
- Dispose of all contaminated material safely and legally (for example, through a licensed waste-disposal contractor). This includes getting rid of any equipment which you used to clean up the spillage and which cannot be decontaminated safely.

A4 Suspected animal poisoning

If you find a creature or animal which you suspect has been affected by being exposed to pesticides, or if you find spilt pesticide or unprotected baits, you should do the following (as appropriate):

- Get the animal away from the source of contamination, taking care not to be contaminated yourself. If necessary, wear appropriate personal protective equipment.
- Take the animal to a vet or contact a vet immediately, keeping the animal sheltered and resting.
- If possible, give the vet the product labels. Otherwise, give the name of the products and their active ingredients.
- Phone the Wildlife Incident Investigation Scheme (WIIS) on 0800 321 600 for an incident involving any creature (except fish). This means not only wild mammals, birds and pets but also bees or other insects, worms and other creatures.
- For incidents involving fish, phone the Environment Agency on 0800 807060.
- Do not touch any dead animals, unprotected baits, pesticides or containers, and never try to unblock a badger sett or fox earth which may have been gassed.
- If it is safe to do so, cover any dead animals or pesticides until they can be disposed of or safely removed to be analysed.

A5 Fire

If you discover a fire that involves pesticides, you should do the following:

- **For small fires** which you can deal with quickly, safely and without causing a significant risk of exposure to fumes or other material produced by burning pesticides, use appropriate firefighting equipment.
- **In all other circumstances**, call the fire brigade and the police, and follow your evacuation procedures. Warn other people who may be at risk (for example, if fumes are blowing in their direction).
- Give the fire brigade a complete and accurate list of the products involved and their active ingredients.
- Deal with any spilt pesticides resulting from the fire or firefighting activities as described above.

Foreword

A message from Lord Bach, Minister for Sustainable Farming and Food, and Carwyn Jones AM, National Assembly for Wales Minister for Environment, Planning and Countryside

'We are happy to give our full support to the new Code of Practice for the Safe Use of Plant Protection Products for England and Wales. The 'Green Code' (Code of Practice for the Safe Use of Pesticides on Farms and Holdings) has been an important source of practical advice for farmers and growers on how to use pesticides safely and, by doing so, to meet the legal obligations which cover the use of pesticides. However, a revision has been needed for some time.

The new Code reflects Government policy to reduce to the lowest possible level the effect of pesticide use on people, wildlife, plants and the environment while making sure that pests, diseases and weeds are effectively controlled. Many of the environmental protection schemes launched under the Voluntary Initiative represent current best practice and the benefits of these and other measures are explained in the Code.

As well as bringing the advice in the 'Green Code' up to date, we have taken this opportunity to widen the scope of the Code to cover all plant protection uses of pesticides. By doing this, we have aimed to produce a single publication which will be relevant and of practical value to all professional users of pesticides in agriculture, horticulture, amenity situations and forestry.

We would like to thank everyone who has contributed ideas and comments both before and during the public consultation period. Together, we believe, we have produced an up to date and readable document which will encourage best practice whenever plant protection products are used.'

Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London
SW1P 3JR

National Assembly for Wales
Environment, Planning and Countryside Division
Cardiff Bay
Cardiff
CF10 3NQ



Notices

C1 General notice under Food and Environment Protection Act 1985 and the Health and Safety at Work etc Act 1974

This code comes into effect on 15 December 2005. On that date it will replace all previous editions of the Code of Practice for the Safe Use of Pesticides on Farms and Holdings.

It will also replace:

- parts of the approved code of practice for the safe use of pesticides for non-agricultural purposes that relate to using pesticides in amenity and forestry situations; and
- the voluntary code of practice for the use of pesticides in amenity and industrial areas



C2 Notice of issuing this code under section 17 of the Food and Environment Protection Act 1985

This code of practice has been prepared for professionals who use plant protection products. It gives practical guidance on part III of the Food and Environment Protection Act 1985 (FEPA) and, in particular, the regulations under that part of the act controlling how plant protection products are used in England and Wales.

As required by Section 17 of FEPA, Ministers have consulted organisations which represent the interests of everyone concerned.

C3 Notice of this code being approved by the Health and Safety Commission under section 16 of the Health and Safety at Work etc Act 1974

Under Section 16(1) of the Health and Safety at Work etc. Act 1974 (HSWA), and with the Parliamentary Secretary (Lords) permission, the Health and Safety Commission has approved the paragraphs of this code as listed below which relate to the health and safety of people at work, or people who may be affected by the activities of people at work.

The following paragraphs of this code are approved to provide practical guidance on controlling exposure to pesticides at work under the Control of Substances Hazardous to Health Regulations 2002 (COSHH) (SI 2002 Number 2677).

Annex C, glossary 1	the meaning of 'approval', 'consent' and 'user'
Paragraph 1.4	The official status of the code
Paragraphs 3.4.1, 3.4.2, 3.4.3 (except 3rd clause and its bullet points), 3.4.4, 3.4.5, 3.4.6 and 3.4.7	Regulation 6: assessment
Paragraphs 3.5.1, 3.5.2 (except 3rd clause), 3.5.5 (except from 5th clause onwards end), 3.5.6 (1st clause) 3.5.6 (3rd clause onwards), 3.5.8 and 3.7.4	Regulation 7: controlling exposure
Paragraphs 3.5.6 (last clause) and 3.5.7 (1st clause)	Regulation 8: using control measures
Paragraphs 3.5.7 (2nd clause to 5th clause)	Regulation 9: maintenance responsibilities
Paragraphs 3.6.1 and 6.6	Regulation 10: monitoring exposure
Paragraphs 3.6.2 (except 2nd clause and its bullet points), 3.6.3 (except last clause), 3.6.4, 3.6.5 (except last clause) and 6.8 (1st clause and its bullet points)	Regulation 11: health surveillance
Paragraphs 2.1, 2.2 and 2.3	Regulation 12: information, instructions and training

The definitions in this code are also approved where they are defining words or phrases used in the paragraphs above. This code takes effect on 15 December 2005.

Signed:



Secretary to the Health and Safety Commission

22 December 2005.

C4 Notice of this code being approved under regulation 21 of the Groundwater Regulations 1998

On 19 July 2005, Defra's Secretary of State approved the paragraphs of this code listed below, under regulation 21 of the Groundwater Regulations 1998. The following paragraphs have been approved to give professionals who use pesticides (except disposing of them) practical guidance on how to prevent substances in list I of the regulations from entering 'groundwater', and prevent substances in list II of the regulations from polluting groundwater.

Annex C, glossary 1	The meaning of 'groundwater'
Paragraph 1.4	The official status of the code
Paragraphs 2.2, 2.3 and 2.4 (except last clause)	Training
Paragraph 3.1.1 (1st and 2nd clauses)	Considering the need to use pesticides
Paragraph 3.1.2 (except last clause)	Considering how to keep the negative effect of using pesticides as low as possible
Paragraph 3.1.3	Choice of pesticide
Paragraphs 3.2.1, 3.2.3, 3.2.4 and 3.2.5	Understanding and following the product label
Paragraphs 3.3.2 (1st and 3rd clauses), 3.3.3 (6th clause) and 3.3.4	Storage
Paragraph 3.8.10 (except 3rd, 12th, 15th, 16th, 17th and 19th clauses)	Preventing contamination of surface water and groundwater
Paragraph 4.2.1	Procedures before applying pesticides
Paragraph 4.3 (4th and 5th clauses and warning box)	Handling damaged containers
Paragraphs 4.4.2 (2nd, 3rd, 4th, 7th and 8th clauses)	Transporting pesticides
Paragraphs 4.5.1 and 4.5.2 (last clause)	Filling equipment used to apply pesticides
Paragraphs 4.6.1 (1st clause), 4.6.7 (1st and 6th clauses), 4.6.9 (1st clause), 4.6.11 (3rd clause), 4.6.13, and 4.7.3 (1st clause)	Procedures while applying pesticides
Paragraph 4.8	Procedures after applying pesticides
Paragraphs 6.3 (1st, 2nd and 8th clauses) and 6.5	Keeping records