



Further information

As indicated elsewhere in this report, HSE is planning to introduce changes to its annual pesticides report from next year (2003/04). These may include format, content and distribution. We also propose producing the report as a web version only, ie available only via HSE's website: www.hse.gov.uk/agriculture

Enquiries about this report and requests for further copies should be addressed to:

**Health and Safety Executive
Agriculture and Wood Sector
The Pearson Building
55 Upper Parliament Street
Nottingham NG1 6AU**

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Printed and published by the Health and Safety Executive

Pesticide Incidents

Report



Field Operations Directorate Investigations

1 April 2002 - 31 March 2003



Introduction

1 This report provides information on incidents and complaints involving pesticides investigated by the Field Operations Directorate (FOD) of the Health and Safety Executive (HSE) between 1 April 2002 and 31 March 2003.

2 The report comprises:

- statistical information on complaints and enforcement;
- a report on alleged ill-health incidents reviewed by HSE's Pesticide Incidents Appraisal Panel (PIAP);
- environmental and other complaints not alleging ill health; and
- case studies.

3 FOD's activity in respect of pesticides is not limited to the investigation of incidents and complaints and formal enforcement. Inspectors also provide advice and guidance to employers, the self-employed and employees during site visits and inspections and to members of the public.

4 When investigating pesticide incidents and complaints, inspectors are concerned not only with the health of people at work and members of the public who may be affected by work activities, but also with the effects of pesticides on the environment. The investigation of incidents often requires expertise from the range of disciplines within HSE. Inspectors, specialist inspectors, qualified medical and occupational health professionals, and scientists from the Health and Safety Laboratory may all be involved. Inspectors also liaise locally with other bodies which have enforcement responsibilities for pesticide activities, including other government departments such as the Environment Agency (EA), the Department for Environment, Food and Rural Affairs (DEFRA), agencies of DEFRA including the Pesticides Safety Directorate (PSD) and the local authorities (LAs) in Great Britain, to ensure a consistent and co-ordinated approach.

5 This report does not include investigations for which these other bodies are the enforcing authority. Similarly, products such as veterinary medicines (including sheep treatments), which are subject to the Medicines Act 1968, are outside the remit of the report.

6 The report and details of individual incidents will be presented to the Advisory Committee on Pesticides (ACP) to inform the pesticides approvals process.

Statistical summary

7 During 2002/03, FOD inspectors investigated 215 reported pesticide incidents (complaints). Sixty complaints involved allegations of ill health, with the remaining 155 complaints involving other issues to do with pesticide use. The total of 215 incidents is an increase of 48 over 2001/02 and is also 18 (9%) higher than the average for the previous ten years.

8 Figure 1 shows how the numbers of incidents and complaints compare with previous years.

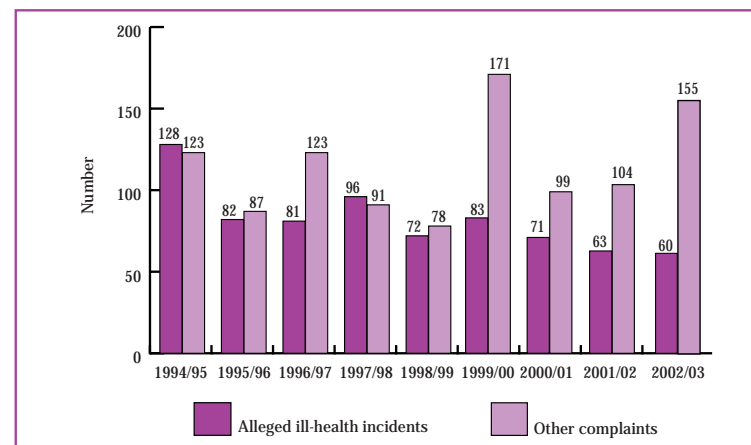



Figure 1 FOD Inspectorate alleged ill-health incidents and other complaints 1994/95-2002/03

9 The number of complaints alleging ill health was three less than in 2001/02 and 25 lower than the average of the previous ten years. Further analysis of these complaints is in paragraphs 15-42.

10 The number of other complaints was 51 (49%) more than in 2001/02 and 43 higher than the average of the previous ten years. Further analysis of these complaints is in paragraphs 43-48.

11 Four Informations (charges) were laid before the Courts during the year, all of which led to convictions. The average fine imposed by the Courts was £1250, which compares with an average of £1064 for 2001/02.



12 Inspectors issued 81 enforcement notices (citing 103 contraventions) under the Food and Environment Protection Act 1985 (as amended) (FEPA) and the Control of Pesticides Regulations 1986 (as amended) (COPR) during the year compared with 47 in 2001/02.

13 These enforcement figures are provisional and may be revised before publication in the Health and Safety Commission's Annual Report 2002/03.

14 Inspectors also enforce matters relating to the use of pesticides under health and safety legislation, principally the Health and Safety at Work etc. Act 1974 (HSW Act) and the Control of Substances Hazardous to Health Regulations 2002 (COSHH). This report does not include information on any related enforcement under health and safety legislation.



Alleged ill-health incidents

The Pesticide Incidents Appraisal Panel

15 HSE's Pesticides Incidents Appraisal Panel (PIAP) considers all incidents reported to FOD where there is any allegation that the use of a pesticide has caused ill health. PIAP is notified of these incidents only on completion of the inspector's investigation.

16 PIAP also considers a small number of other incidents each year which fall within the jurisdiction of other parts of HSE or of a different enforcing authority, such as a local authority.

17 The data in this report is presented in line with that of previous reports since 1995/96. However, the role of PIAP is currently under review within HSE as part of a wider discussion, both within Government and by its Advisory Committee on Pesticides (ACP), on pesticide monitoring and surveillance schemes. Members of the ACP and other stakeholders have made representations as to the content and presentation of data in the report and HSE anticipates making changes to the format from next year (2003/04).

18 The PIAP membership for 2002/03 is listed in Appendix 1.

19 The main purpose of PIAP, however, remains 'to provide an overview of alleged ill health attributed to pesticide exposure (as reported to and investigated by HSE) so that new issues and trends can be identified, and to inform the pesticides approval process'.

20 To fulfil this purpose, PIAP considers individual incident and case reports, not to establish the cause, but to consider the strength of the association between exposure and ill health. During the year the panel has, therefore, deliberately moved further from strict case assessment on a basis of 'beyond reasonable doubt', to an assessment on the 'balance of probability'.

21 This shift should lower the threshold for recording cases as being potentially relevant or important. It should also help identify any new associations. While the change might cause some distortion to the comparative year-on-year results presented in the annual report series it will provide a 'categorisation' of cases more appropriate to PIAP's defined purpose.

22 Appendix 2 outlines the current case/incident classification scheme, which remains unchanged from previous years, and Appendix 3 is a flow chart showing how PIAP reviews cases to reach its decision.

Summary information on alleged ill-health incidents for 2002/03

23 Table 1 shows the outcome for the 61 incidents forwarded to PIAP in 2002/03 broken down according to the panel's assessment (using the classification scheme in Appendix 2) and the employment status of the people involved.

24 On consideration and in the absence of any evidence of exposure, the panel concluded that one of the reports should not be classified as an ill-health incident. As a result, throughout this report, reference is made to 60 incidents of alleged ill health in 2002/03.

	Total		Employees/ self-employed		Members of public	
	Incidents	(People)	Incidents	(People)	Incidents	(People)
Confirmed	0	(0)	0	(0)	0	(0)
Likely	5	(15)	1	(2)	4	(13)
Open assessment (i)	1	(2)	0	(0)	1	(2)
Open assessment (ii)	2	(7)	0	(0)	2	(7)
Unrelated	5	(5)	1	(1)	4	(4)
Insufficient information	25	(35)	1	(1)	24	(34)
Pending	22	(28)	4	(5)	18	(23)
Not an incident	1	(2)	0	(0)	1	(2)
Total	61	(94)	7	(9)	54	(85)

Table 1 Number of alleged ill-health incidents and people affected analysed by PIAP decision and employment status 2002/03

25 In this and subsequent analyses, incidents in which more than one individual was alleged to have been made ill and for which the individuals received a different assessment by the panel have been classified according to the most serious individual assessment. The ranking of severity is taken as being 'confirmed', 'likely', 'open assessment', and 'insufficient information'.

26 The panel was unable to confirm any of this year's incidents although five (8%) were assessed as having a 'likely' link to pesticide exposure. Some of the 22 incidents for which a decision is still pending may in due course be categorised as 'confirmed' or 'likely'. These 'likely' incidents involved 15 people. Only one of the five incidents was directly occupationally related, in that it involved two employees who were using pesticides as part of their job. The remaining four incidents involved either members of the public or those incidentally exposed while at work, the latter category including an incident involving seven fire fighters exposed during an emergency callout.

27 All 28 incidents identified as 'pending' in last year's report, together with six carried forward from previous years (one from 1999/2000 and five from 2000/01), have now been considered by the panel. The decisions reached have been included in the trend information presented in the remainder of this section. Twenty-two incidents from the current year (2002/03) remain pending, while further medical or exposure information is sought.

Overall trends

28 Figure 2 shows the number of incidents forwarded to PIAP in each of the last ten years, analysed according to whether the panel classified the link between pesticide usage and the alleged ill health as 'confirmed' or 'likely', or came to some other decision. It is too early to expect to see any effect from the change in approach to the assessment of incidents outlined in paragraphs 20 and 21.

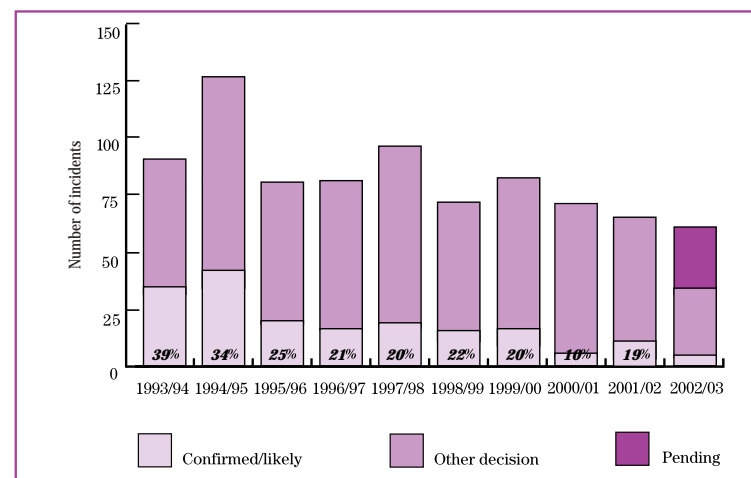


Figure 2 Trends in PIAP decisions

29 At 60 (following the decision to declassify one case – see paragraph 24) the total number of alleged ill-health incidents in 2002/03 was the lowest figure yet recorded. The number of incidents has fallen steadily since 1999/2000 when 84 alleged ill-health incidents were reported. The proportion of the total (excluding 'pending') incidents assessed as 'confirmed' or 'likely', has ranged between 20% and 25% since 1995/96 except in 2000/01 when it was 10%. In the current year, although the decision on 22 cases is still 'pending', the figure is 13% (5 of 38). The proportion remains considerably lower than in the early 1990s, when nearly half of the cases considered by the panel were assessed as 'confirmed' or 'likely'.

30 The number of people involved in reported incidents considered by the panel in each of the last ten years, either people using pesticides as part of a work activity or members of the public, is shown in Figure 3 (excluding a small number of cases where employment status was not recorded).

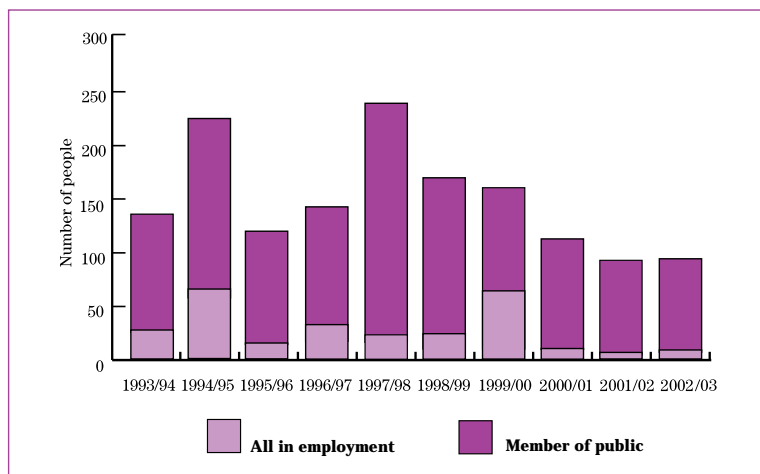


Figure 3 Trends in employment status: all alleged ill-health incidents

31 Figure 3 shows that the majority of people involved in reported incidents each year continue to be members of the public. The proportion in employment has fluctuated over the past ten years although for the past three years it has been between 8% and 10%. The total number of people involved in alleged ill-health incidents has also fluctuated greatly from one year to the next.

Much of this fluctuation reflects the occurrence of single incidents involving large numbers of people. By contrast, the number of incidents reported each year has not been so variable, as Figure 2 shows.

Recent ill-health data

32 Since 1994/95, the panel has recorded the type and severity of the ill health experienced by people involved in incidents with a 'confirmed' or 'likely' assessment. In 2002/03 this has been extended to include cases receiving an open assessment. Symptoms are recorded as 'acute' and/or 'chronic', 'local' and/or 'systemic' and their severity as 'mild' (requiring no or self-treatment), 'moderate' (presenting to a GP or hospital Accident and Emergency Department) or 'severe' (in-patient treatment).

33 Before the current year, none of the cases considered by the panel has been classified as having resulted in 'chronic' ill-health effects. During 2002/03, however, three individuals, all pending from 2001/02, were recorded as having chronic ill health. One complained of persistent respiratory symptoms from repeated overspraying, one of memory loss and mood swings from repeated occupational exposures, and one of suffering multiple symptoms resulting from ten years' exposure to a range of pesticides and veterinary medicines. All three cases have been recorded as open assessments.

34 Table 2 summarises the information on severity of symptoms for the current year 2002/03. It incorporates the assessments of all incidents (eight) and associated individuals (24) with a 'confirmed', 'likely', or 'open' assessment.

	Mild		Moderate		Severe	
	Incidents	(People)	Incidents	(People)	Incidents	(People)
Confirmed	0	(0)	0	(0)	0	(0)
Likely	3	(13)	2	(2)	0	(0)
Open assessment (i)	1	(2)	0	(0)	0	(0)
Open assessment (ii)	2	(7)	0	(0)	0	(0)
Total	6	(22)	2	(2)	0	(0)

Table 2 Severity of ill health

35 As in most previous years, the majority of people were assessed as having 'mild' symptoms (11 classified as local, 11 as systemic) while the remainder (two) were assessed as having 'moderate local' symptoms. No one was considered by the panel to have suffered from 'moderate systemic' or 'severe' symptoms.

36 Mild local symptoms are most commonly a self-limiting skin rash or an irritation of the skin, eyes or respiratory tract, while mild systemic symptoms include transient headaches and nausea. The two individuals with moderate symptoms both attended their general practitioner, one with a persistent shortness of breath and one with a persistently sore mouth.

Recent and historical data on pesticides

37 For each of the pesticides reported to be involved in an incident, the database records the trade names and the names of the active ingredients. The latter are classified by chemical type (eg organophosphate) and function (eg insecticide) using DEFRA's Central Science Laboratory classification for agricultural pesticides, and HSE's classification for non-agricultural pesticides. The most common pesticide function is herbicide, followed by insecticide and fungicide. Figures 4a and 4b show the most commonly encountered chemical types in the incidents reviewed by PIAP in the ten-year period, 1993/94 to 2002/03.

38 Previous comments by ACP members as to the presentation of the data in Figures 4a and 4b have been noted and will be incorporated into the reports for 2003/04 and subsequently.

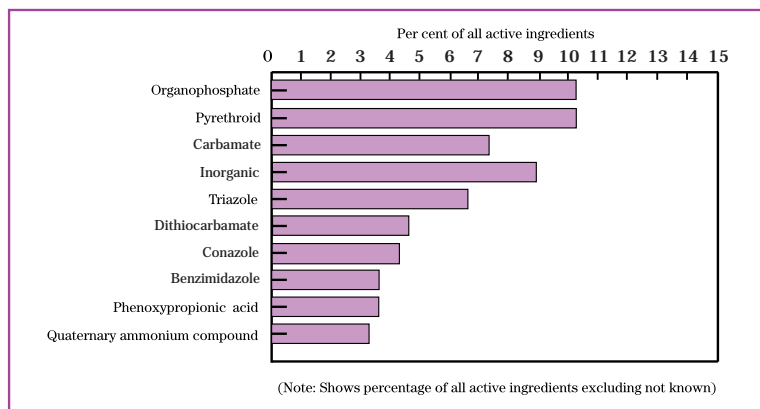


Figure 4a Top ten chemical types involved in confirmed/likely incidents 1993/94-2002/03

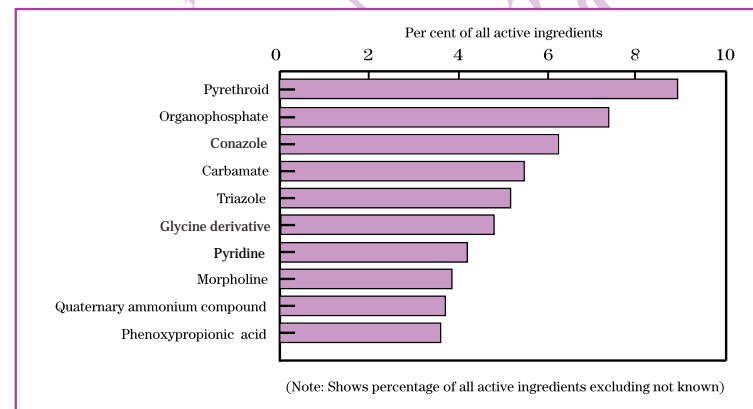


Figure 4b Top ten chemical types involved in all incidents 1993/94-2002/03

39 The relative importance of particular categories may simply reflect the fact that their usage is more widespread rather than indicating that they are more hazardous. Also, mention of an active ingredient in the report of an incident need not imply that it contributed to any ill-health effect: many pesticides include more than one active ingredient, as well as non-active components, and it may be that one of these was responsible.

40 Since April 2001, the panel has included consideration of the hazards associated with co-formulants in its assessment of incidents.

41 Figures 4a and 4b show that organophosphate and pyrethroid were the most commonly recorded pesticide types over the period, for 'confirmed'/'likely' ill-health incidents, each accounting for approximately 10% of the total (31 of 302 identified actives). Pyrethroid was the most commonly reported pesticide type for all reported incidents, accounting for approximately 9% of the total (136 of 1512 identified actives), over the same period.

42 When considering only the more recent data, the most commonly recorded pesticide type in the years 2001/02 to 2002/03 was, again, pyrethroid for all incidents (10% of the total). Although organophosphate remains the second most frequent type of active ingredient recorded in the past ten years (all incidents) there were no reports in the current year and only two in 2001/02.

Environmental and other non-health complaints 2002/03

43 During the year there were 155 environmental and other complaints, ie complaints in which there were no allegations of ill health relating to exposure. This is an increase of 51 (49%) over 2001/02 and compares with an average of 112 and a range of 78 to 171 in the previous ten years. See Figure 1 and paragraphs 7-10 for statistical analysis of the figures.

44 Figures 5, 6 and 7 summarise the number of complaints in 2002/03, classified according to the industry sector in which the pesticides were used, the work activity involved and the method of application.

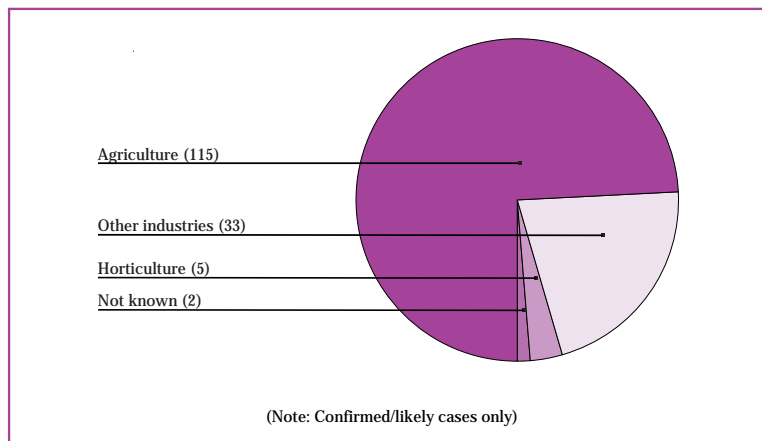


Figure 5 Number of environmental and other non-health complaints 2002/03: classified by sector

45 Of the 155 complaints, 74% originated from within the agricultural sector. 'Other industries', including the amenity sector, pest control and wood treatment accounted for a further 23% of complaints, and horticulture the remaining 3%.

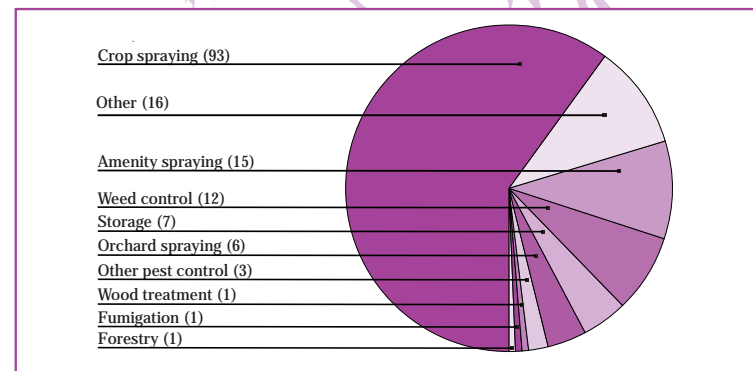


Figure 6 Number of environmental and other non-health complaints 2002/03: classified by activity

46 Crop spraying accounted for 60% of all environmental and other non-health complaints investigated during 2002/03. Other significant activities included amenity spraying (10%), weed control (8%), storage (5%) and orchard spraying (4%). The remaining 13% occurred within a group of miscellaneous activities, including forestry, fumigation, other pest control, wood treatment and 'other'.

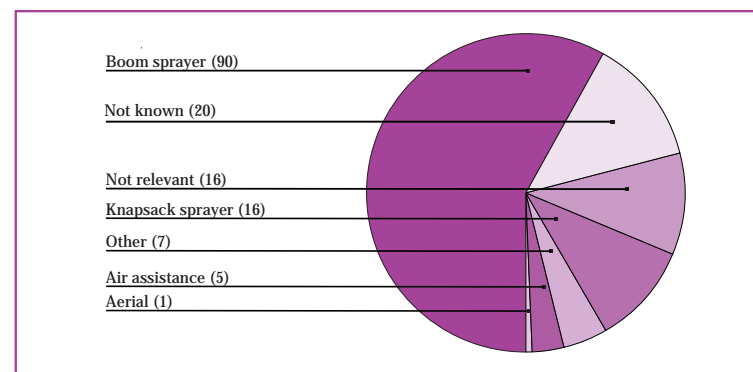



Figure 7 Number of environmental and other non-health complaints 2002/03: classified by application method



47 Conventional crop boom sprayers were involved in approximately 58% of all environmental and other non-health complaints. Knapsack spraying accounted for 10%, and 3% of incidents involved an air-assisted sprayer. A further 5% involved 'other' identified methods of application, including aerial application. In 24% of complaints the application method was either not recorded or not relevant, eg where the concern related to storage, security, record-keeping etc.

48 Of the 155 complaints, 143 were reported by members of the public, consistent with experience in previous years, and six were made by employees (including one ex-employee). The remaining six were made by others, including farmers, public bodies and anonymous complainants.



Case studies

As in previous years case studies are included in the report to illustrate key issues and areas of concern that commonly give rise to complaints to FOD and/or result in enforcement action. No new issues or problems arose during 2002/03 so the case studies address long-standing issues such as crop spraying and drift, prior notification of the intention to spray, the training and competence of operators and pesticide storage.

Spray drift

Complaints received from members of the public about spray drift continue to comprise the single largest category of incidents investigated by HSE inspectors. Spray drift is an indicator of poor control of pesticide application and continues to be a source of friction between farmers and neighbours.

There are two specific areas of concern:

- spraying in adverse weather conditions (generally when the wind speed is too high); and
- failure to notify neighbours of the intention to spray.

Case 1

A member of the public complained that a contractor had sprayed a pre-drilling herbicide in weather conditions that resulted in drift from the target area onto neighbouring land causing damage to vegetation.

On investigation, there was evidence of damage to grass on adjacent land, to a distance of 11 m from the field boundary. There was no report of associated injury or illness to humans or animals. The investigation concluded that spraying had been carried out in adverse weather – the wind speed at the time was estimated in the range of 10-12 m/s at boom height – causing significant drift from the target field.

The active partner in the business had previously been warned about spraying in high winds and advised to obtain and use a wind-speed meter.

The contractor was prosecuted under the Control of Pesticides Regulations 1986 (as amended) (COPR) for failing to confine the application to the area of land intended to be treated. The active partner pleaded guilty and was fined £1500, plus a contribution of £1223 towards the prosecution costs.



Case 2

A neighbouring farmer complained that a contractor had sprayed pesticides on a crop of sugar beet in weather conditions that resulted in drift of the pesticide onto his adjacent pea crop. The complainant's wife alleged that she had witnessed the sprayer operating in high winds a day before discovering damage to the crop.

Investigation concluded that spray drift had probably occurred which resulted in some damage to the crop in the neighbouring field.

The contractor was prosecuted under COPR for failing to confine the application to the area of land intended to be treated. The active partner pleaded guilty and was fined £400, plus a contribution of £800 towards the prosecution costs.

Under Schedule 3, 'Conditions relating to consent to the use of pesticides' of COPR, users of pesticides have a duty to confine the application of a pesticide to the land, crop, structure, material or other area they intend to treat, to minimise risks to people, wildlife and the environment. This requires operators to take account of weather conditions and, in particular, wind speed. The DEFRA Code of Practice for the safe use of pesticides on farms and holdings (the Green Code) gives practical measures for preventing spray drift, including advice on wind speed and direction. The Code advises that a steady Force 2 (3.2-6.5 km/h) slight breeze blowing away from any sensitive areas or neighbour's land provides the safest conditions for spraying. It goes on to say that operators should not spray if conditions are unsuitable or unpredictable.

While the Code gives guidance on the estimation of wind speed from the movement of trees, clouds and other environmental indicators, it recommends the use of simple wind-speed meters. Accurate wind-speed measurement is a straightforward, practical control measure, which, if carried out before applying pesticides, has a direct effect on limiting application to non-target crops and on the exposure of bystanders and members of the public.

Farmers and contractors are strongly advised to purchase and use wind-speed meters and to record the readings in their pesticide treatment records. Not only is this good practice but it will also provide them with clear evidence of compliance with the Green Code.



Prior notification of the intention to spray

Prior notification of the intention to spray pesticides is often demanded by members of the public and the reluctance of users to provide it, particularly in rural areas, continues to be a major cause of complaints.

Case 3

A member of the public alleged that she had suffered ill health following the application of sulphuric acid to a potato crop in a neighbouring field. She claimed to have been in her garden at the time of application. The complainant's property was within 25 m of the field but neither the farmer nor the contractor who carried out the work had given her written notice of the intended application.

The contractor stated that he only ever visited sites on the day of application and did not get involved with the provision of notification to neighbours, though he was aware of the requirement. The farmer who owned the land claimed to be unaware of the need for notification and had not been advised of the need to notify by the contractor, though he would have been happy to provide prior notification had he known. The case illustrates the need for clear communication and co-operation between farmers and contractors to ensure that legal duties are properly discharged in good time.

The contractor was prosecuted under COPR for failing to notify the owners of an adjacent property of his intention to spray sulphuric acid and was fined £3000 plus a contribution of £526 towards the prosecution costs.

The requirement on pesticide users to consult and provide prior notification is limited under COPR 1986 (as amended):

- ***to aerial application (Schedule 4); and***
- ***under the conditions of approval, to the application of sulphuric acid as an agricultural desiccant. Users are required to give at least 24 hours written notification of the intended operation to the occupants of any premises within 25 m of the boundary of the land intended to be treated.***

Separate considerations apply where pesticides are to be used on or near water where prior agreement from the Environment Agency is required.



It is often argued that the application of pesticides by conventional field crop sprayers should not pose significant risks to people beyond the field boundary as long as the general advice in the Green Code is followed. However, the Code recommends that prior notification to the occupiers of land, premises or houses close to the target area is good practice as it may help allay concerns they may have about the possible ill-health effects. Further advice is given in the Code of best practice – Safe use of sulphuric acid as an agricultural desiccant prepared by the National Association of Agricultural Contractors.

Training and Certificates of Competence

Several complaints were received during the year about the competence and qualifications of pesticides users. Training and competency are key elements in ensuring the safe use of pesticides.

Case 4

A member of the public claimed a farmer was using an unqualified contractor who had oversprayed into her garden. The complainant, who lived adjacent to the potato field, claimed that the continual spraying in a neighbouring field had scorched the leaves on a tree in her garden. Samples of vegetation were taken for analysis but the results did not support the allegation. The field had been sprayed many times during the season, for pre-emergence weed control, blight, and haulm treatment, before lifting. A local farmer, who did not hold a Certificate of Competence, had carried out the spraying on a sub-contract basis.

The self-employed farmer was prosecuted under COPR for undertaking commercial work without a Certificate of Competence and was fined £100 as well as £150 towards the prosecution costs.

Users of any pesticide must be adequately instructed and trained and must be competent. Additionally, users are required to hold a Certificate of Competence (recognised by Ministers) if they use a pesticide approved for agricultural use (including horticulture and amenity) and they:

- ***were born after 31 December 1964; or***
- ***are providing a commercial service.***

Certificates of Competence in the use of pesticides recognised by Ministers are the pesticide application module certificates issued by the National Proficiency Tests Council (NPTC) and the Scottish Skills Testing Service (SSTS).



Storage of pesticides

Inadequate accommodation and arrangements for storing pesticides continue to give rise to complaints and to attract attention during the routine inspection of users' premises.

Case 5

During the year, inspectors came across many situations where the storage of pesticides was inadequate. Matters of concern included:


- *the storage of pesticides in areas that were not secure, eg workshops;*
- *unattended and unsecured stores;*
- *the lack of bunding in storage buildings to retain leakage in the event of an accident, spillage or incident such as a fire; and*
- *stores containing non-approved, revoked or date-expired pesticide products – a clear indication of poor stock management.*

These matters were largely resolved by inspectors issuing enforcement notices to bring about improvements.

Pesticides stores should be fire-resistant structures. They should be dry and frost-free and be kept secure against unauthorised access. Stores should be bunded to retain leakages or spillages. The bund capacity should be 110% of the volume of the products likely to be stored at any time of the year – though in environmentally sensitive areas the bund should be capable of retaining 180% of the volume of the products in store. The store should be kept closed and locked at all times unless a responsible person is in attendance.

Stocks of pesticides should be carefully managed from ordering to disposal. Regular checks should be made to identify redundant pesticides and arrangements made for their safe disposal.

The EU pesticides review programme under Directive 91/414/EC will result in the withdrawal of approval for sale, use and storage of 31 active substances which are currently used in the formulation of approximately 130 professional products and a further 80 amateur products.



Further information on the products subject to phased revocation under the review programme can be found on the PSD website (www.pesticides.gov.uk). The last day for use of withdrawn products will be 31 December 2003. The corresponding date for storage (for disposal purposes only) is 31 March 2004. Users are advised to make sure that stocks are used or removed from storage for safe disposal in accordance with this timetable.

Detailed advice on the sizing, siting, construction, bunding, marking and management of both fixed (permanent) and mobile pesticides stores can be found in the free HSE Agricultural Information Sheet AIS16 Guidance on storing pesticides for farmers and other professional users.

Further advice and guidance on the requirements for training and other matters relating to pesticide applications including the transport of pesticides can be found in the DEFRA Code of Practice for the safe use of pesticides on farms and holdings. Advice on the use of pesticides in the amenity sector can be found in the Code of Practice for the use of approved pesticides in amenity and industrial areas prepared and published jointly by the Crop Protection Association and the National Association of Agricultural Contractors.



Appendix 1: Members of PIAP 2002/03

During 2002/03 members of the panel were:

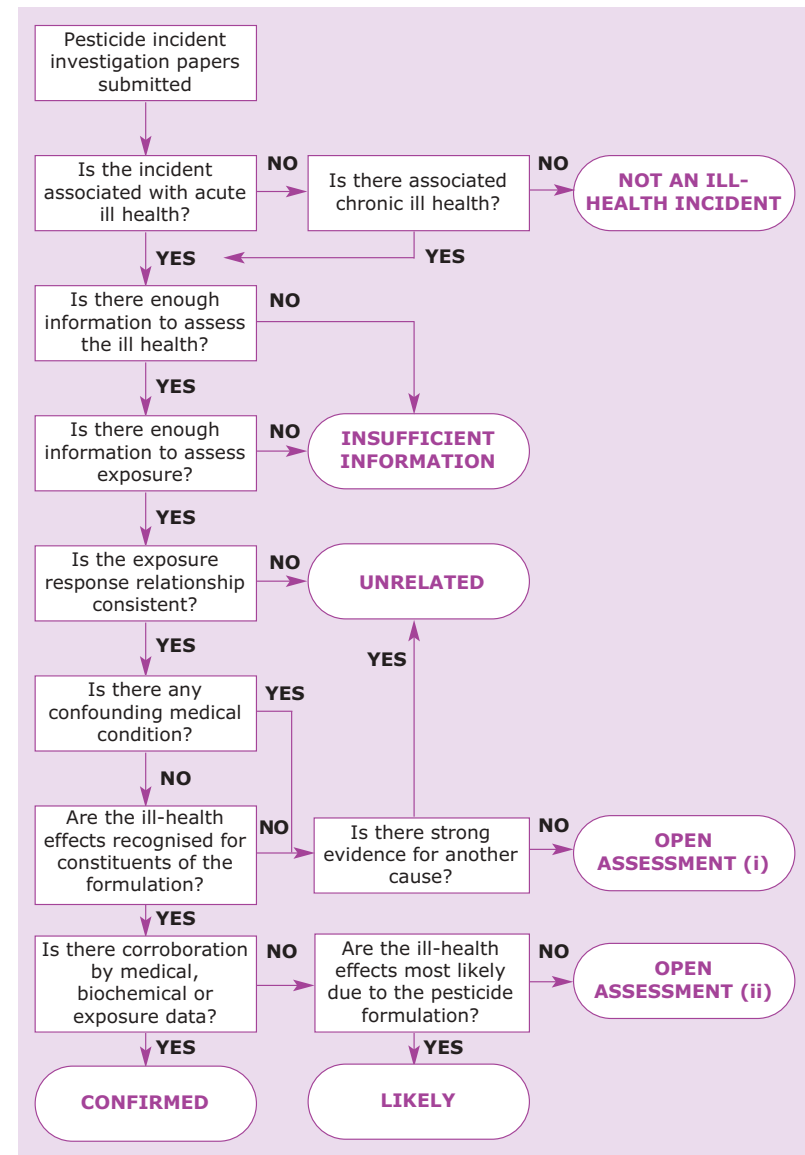
Dr R Rawbone (Chairman)	HSE Corporate Science and Analytical Services Directorate
Dr A Scott	HSE Employment Medical Advisory Service
Mr G Walker	HSE Field Operations Directorate
Dr J Battershill	Department of Health
Miss F Northall	National Poisons Information Service
Miss G Cullen	National Poisons Information Service
Dr A Robertson	Institute of Occupational Medicine
Dr R Ferner	West Midlands Centre for Adverse Drug Reaction Reporting
Dr T C Aw	University of Kent
Dr S Bradberry	National Poisons Information Service

The secretary was from HSE's Corporate Science and Analytical Services Directorate.

Appendix 2: Pesticide Incidents Appraisal Panel classification scheme

Confirmed	<p>There are clinical symptoms and signs typical of exposure to the cited pesticide formulation combined with either:</p> <ul style="list-style-type: none"> ■ corroborating medical and (where appropriate) biochemical evidence; or ■ evidence of overexposure.
Likely	<p>The balance of evidence based on reported exposure circumstances, clinical symptoms and signs or biochemical evidence (where appropriate) is consistent with ill health due to exposure to the cited pesticide formulation.</p>
Open assessment	<p>(i) The reported ill health is not consistent with the known potential ill-health effects of the cited pesticide formulation given the reported exposure circumstances but the implied association cannot be entirely discounted in the light of current knowledge; or</p> <p>(ii) the evidence is consistent with pesticide exposure being the cause of the reported ill health but alternative explanations, eg pre-existing disease are also present.</p>
Unrelated	<p>There is strong evidence, eg evidence about exposure or from medical reports, that the reported ill health is not pesticide-related.</p>
Insufficient information	<p>The available data are insufficient, incomplete or conflicting and the panel is unable to classify a case for one or more of these reasons.</p>

Appendix 3: Flow chart for PIAP assessments





Appendix 3: Health and Safety Executive offices

Wales and South West Division

Government Buildings, Phase 1, Ty Glas, Llanishen, Cardiff CF14 5SH
Tel: 029 2026 3000

Inter City House, Mitchell Lane, Victoria Street, Bristol BS1 6AN
Tel: 01179 886000

East and South East Division

14 Cardiff Road, Luton LU1 1PP
Tel: 01582 444200

Priestley House, Priestley Road, Basingstoke RG24 9NW
Tel: 01256 404000

Wren House, Hedgerows Business Park, Colchester Road, Springfield, Chelmsford CM2 5PF
Tel: 01245 706200

Phoenix House, 23-25 Cantelupe Road, East Grinstead RH19 3BE
Tel: 01342 334200


London Division

Rose Court, 2 Southwark Bridge, London SE1 9HS
Tel: 020 7717 6000

Midlands Division

1 Hagley Road, Birmingham B16 8HS
Tel: 0121 607 6200

5th Floor, Belgrave House, 1 Greyfriars, Northampton NN1 2BS
Tel: 01604 738300



1st Floor, The Pearson Building, 55 Upper Parliament Street, Nottingham NG1 6AU
Tel: 01159 712800

The Marches House, Midway, Newcastle-under-Lyme ST5 1DT
Tel: 01782 602300

National Agricultural Centre, Stoneleigh, Kenilworth, Warwickshire CV8 2LZ
Tel: 02476 698350

Yorkshire and North East Division

Marshall's Mill, Marshall Street, Leeds LS11 9YJ
Tel: 0113 283 4200

Edgar Allen House, 241 Glossop Road, Sheffield S10 2GW
Tel: 0114 291 2300

Arden House, Regent Centre, Regent Farm Road, Gosforth, Newcastle-upon-Tyne NE3 3JN
Tel: 0191 202 6200

North West Division

Grove House, Skerton Road, Manchester M16 0RB
Tel: 0161 952 8200

Marshall House, Ringway, Preston PR1 2HS
Tel: 0161 952 8200

Scotland


Belford House, 59 Belford Road, Edinburgh EH4 3UE
Tel: 0131 247 2000

375 West George Street, Glasgow G2 4LW
Tel: 0141 275 3000



Further reading

- 1 *LERAP: Horizontal boom sprayers - A step-by-step guide to reducing aquatic buffer zones in the arable sector* PB5621 Pesticides Safety Directorate 2001, available from DEFRA Publications, ADMAIL 6000, London SW1A 2XX Tel: 08459 335577
- 2 *LERAP: Broadcast air-assisted sprayers* PB6533 Pesticides Safety Directorate 2002, available from DEFRA Publications, ADMAIL 6000, London SW1A 2XX Tel: 08459 335577
- 3 *The Control of Pesticides Regulations 1986* SI 1986/1510 ISBN 0 11 067510 X The Stationery Office 1986, available from The Publications Centre Tel: 0870 600 5522
- 4 *The Control of Pesticides (Amendment) Regulations 1997* SI 1997/188 ISBN 0 11 063695 3 The Stationery Office 1997, available from The Publications Centre Tel: 0870 600 5522
- 5 *Code of Practice for the safe use of pesticides on farms and holdings* (the Green Code) PB3528 DEFRA and HSC, available from DEFRA Publications, ADMAIL 6000, London SW1A 2XX Tel: 08459 335577
- 6 *Code of best practice – Safe use of sulphuric acid as an agricultural desiccant* available from the National Association of Agricultural Contractors (NAAC), Samuelson House, Paxton Road, Orton Centre, Peterborough PE2 5LT Tel: 01733 362920
- 7 The National Association of Agricultural Contractors (NAAC) and the Crop Protection Association's *Code of Practice for the use of approved pesticides in amenity and industrial areas* ISBN 1 871140 12 9, available from NAAC, Samuelson House, Paxton Road, Orton Centre, Peterborough PE2 5LT Tel: 01733 362920 (This publication is currently being reviewed.)
- 8 *Guidance on storing pesticides for farmers and other professional users* Agriculture Information Sheet AIS16 HSE Books 1996 (free)
- 9 *Reporting incidents of exposure to pesticides and veterinary medicines: What to do if you think people, animals or the environment have been harmed by exposure to pesticides or veterinary medicines* Leaflet INDG141(rev1) HSE Books 1999 (single copy free)



Information on approved agricultural and non-agricultural pesticide products was historically published annually by PSD and HSE as, for example, *2000 – Your guide to approved pesticides* (the Blue Book). This listed all the products approved under the Control of Pesticides Regulations 1986, as well as information on the legislation and the approvals system. It was decided at the start of 2002 not to produce a printed version, but to place all the information online, to make it freely available to anyone with an interest in pesticides. The Internet version will be continually updated so that customers have access to the most up-to-date information. The web addresses are:

www.pesticides.gov.uk/Blue_Book/Contents.htm
(for agricultural pesticides/plant protection products); and

www.hse.gov.uk/hthdir/noframes/pestpubs.htm
(for non-agricultural pesticides).