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PLANT HEALTH, WALES

The Code of Practice to Prevent and Control the Spread of Ragwort 2006

Made	*. 2006*
Coming into force	*. 14 June 2006*

The National Assembly for Wales, in exercise of the power under section 1A(1) of the Weeds Act 1959, is making the Code of Practice to Prevent and Control the Spread of Ragwort 2006 ("the Code").

The Code is made in accordance with the procedure prescribed by Standing Order 29 of the National Assembly of Wales.

The Code is attached as an annex to this index.

Signed:

. The Presiding Officer of the National Assembly

Date:

CONTENTS

EXECUTIVE SUMMARY

1 Ragwort is highly toxic to grazing animals, whether they graze ragwort infested pastures or consume ragwort in feed (dried grass) or forage (hay, haylage and silage). Horses are particularly susceptible to poisoning by common ragwort and there is limited evidence suggesting potential harm to humans.

2 Primary responsibility for controlling the spread of ragwort lies with the occupier of the land on which common ragwort is growing. Every occupier of land where ragwort is present should take reasonable measures to prevent the spread to neighbouring land. This is particularly important where horses and grazing livestock are present and where land is used for the production of feed or forage for horses and other animals.

3 Common ragwort (*Senecio jacobaea*) is the only ragwort species specified in the Weeds Act 1959 and is therefore the only species to which the provisions of this Code apply. All ragwort species are likely to exhibit similar toxicity to animals, and species other than common ragwort may require to be controlled where they pose a direct risk to horses and grazing stock or are a threat to the production of safe animal feed or forage.

4 The most effective way of controlling ragwort is to prevent its establishment through strategic management rather than last minute control. In managed grasslands, good pasture management may minimise the chance of ragwort establishing itself. In amenity areas, highway verges, railway land and woodland, any activities which cause disturbance to the soil and the loss of ground cover will increase the risk of ragwort becoming established.

5 Uncultivated land, derelict and waste areas are a potential source of ragwort infestation. The owners/occupiers and/or their agents should monitor the land within their control for the presence of ragwort and take appropriate action to control its spread where it poses a threat to land used for grazing, feed or forage production.

6 Occupiers of land should be vigilant for the presence of ragwort. Detection at an early stage will enable any potential problems to be more easily, safely and cheaply dealt with.

7 This Code recognises that common ragwort and other ragwort species are native to the British Isles and are therefore an inherent part of our flora and fauna, along with invertebrate and other wildlife they support. Some 77 species of insect herbivore feed on ragwort, including 27 species of moth. 30 invertebrates are confined to ragwort, including the Cinnabar moth and 7 species of micro moth. The Code does not propose the eradication of ragwort but promotes a strategic approach to control the spread of ragwort where it poses a threat to the health and welfare of grazing animals and the production of feed or forage.

8 This Code provides guidance on when and what measures need to be taken to control the spread of ragwort. It provides valuable information for landowners,

occupiers of land, land managers and contractors responsible for land management to make informed decisions about control strategies on agricultural land (including areas grazed by horses), cropped and uncropped farmland, forestry and woodland, industrial and amenity areas, road verges, railways, aquatic areas and semi-natural habitats including nature conservation areas.

BACKGROUND

About this Code

9 This Code of Practice is a practical guide to help public bodies, relevant authorities, owners and occupiers of land control the spread of common ragwort only (referred to as ragwort within this document). It aims to control the spread of ragwort, and therefore help prevent the death of horses and livestock grazing ragwort infested land and from eating ragwort contaminated feed and forage. It is not the objective of the Code to seek to control the spread of ragwort where it does not pose a threat to the health and welfare of animals, the production of feed or forage or other agricultural activities.

10 This Code which applies to Wales only will be given evidential status in any proceedings taken under the Weeds Act through the Ragwort Control Bill. This will mean that, if you do not keep to this Code, it will not be an offence but may be used in evidence in any legal action. However, owners/occupiers should be able to establish a defence if they can demonstrate that control measures that comply with this Code are in place. Any new practices for the control of the spread of ragwort, which are not covered in the Code, should follow the general principles set out in it.

11 The Code provides a summary of the legislation controlling ragwort and guidance on what steps are considered to be reasonable to prevent the spread of ragwort, when a notice has been issued by the National Assembly for Wales under Section 1 of the Weeds Act 1959 requiring the occupier to take action to prevent ragwort from spreading.

12 Any action to control the spread of ragwort should have due regard to environmental impacts of the control methods and the need to protect the countryside and maintain biodiversity.

13 The Code recognises that ragwort is a toxic plant and that there are health and safety risks which must be taken into account by suitable and sufficient risk assessment prior to undertaking any ragwort control or clearance activities.

Laws to Control the Spread of Ragwort

14 The Weeds Act 1959 gives the National Assembly for Wales statutory powers of enforcement. If satisfied that injurious weeds are growing upon any land, the Assembly may serve a notice requiring the occupier to take action in order to prevent the spread of those weeds. Any unreasonable failure to comply with a

notice is an offence. The weeds that this legislation applies to are: common ragwort (*Senecio jacobaea*); spear thistle (*Cirsium vulgare*); creeping or field thistle (*Cirisium arvense*); curled dock (*Rumex crispus*); broad-leaved dock (*Rumex obtusifolius*)[1].

15 The Weeds Act 1959 enables the Assembly to investigate complaints to see if there is a risk of injurious weeds spreading.

Responsibilities to Control the Spread of Ragwort

16 The primary responsibility for control rests with the occupier of the land on which the weeds are growing. This responsibility applies equally to ragwort and other injurious weeds specified under the Weeds Act 1959. When seeking to control the spread of ragwort it is expected that all landowners, occupiers and managers will co-operate and take a collective responsibility for ensuring that effective control of the spread of ragwort is achieved.

17 The provisions of the Act only apply to common ragwort and do not apply to other ragwort species, however, it may be necessary to control the spread of most ragwort species where they pose a direct risk to horses and other animals unless it is a protected species such as fen ragwort.

Actions Required to Control the Spread of Ragwort

18 Where land is affected by ragwort an assessment of the need to control the weed should be made. Where there is a risk that the presence of ragwort may be harmful to horses and other grazing stock or to the production of feed or forage, then a programme to control its spread should be implemented.

19 Where land is affected by ragwort, and the presence of ragwort presents a risk of it spreading to land where it may be harmful to horses and other grazing stock, the production of feed or forage or other agricultural activities, then a programme to control its spread should be implemented.

20 Where there is no immediate risk, but the presence of ragwort is likely to present a risk in the future, then contingency plans should be prepared for its control.

21 Where there is no immediate risk and the presence of ragwort is unlikely to present a risk to susceptible animals and crops due to its location, then no immediate action to control the spread of ragwort is required, although the situation should be monitored and the risks reassessed should circumstances change.

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[1] The National Assembly for Wales is empowered to add to this list where necessary.

Advice

22 Advice on the Weeds Act and ragwort control is available from Food and Market Development Division, which distributes a range of guidance listed at Appendix III: Useful Publications.

23 Technical advice is also available from a range of organisations listed at Appendix IV.

24 Advice may also be available from organisations which are responsible for the management of land in their ownership and/or control i.e. the Welsh Assembly Government Transport Directorate, Local Highway Authority, Network Rail, British Waterways, Countryside Council for Wales (CCW), Cadw, Forestry Commission (Wales), Ministry of Defence and Local Authorities (Appendix II).

WHY CONTROL COMMON RAGWORT?

Introduction

25 Common ragwort (*S. jacobaea*) is a member of the family *Compositae* and is one of at least 27 species found in the UK not including hybrids. The genus *Senecio* also includes, but is not limited to, Marsh Ragwort (*S. aquaticus*), Hoary Ragwort (*S. erucifolius*), Oxford Ragwort (*S. squalidus*) and Welsh Ragwort (*S. cambrensis*).

26 Ragwort species contribute to the biodiversity value of many habitats and are an important source of food for many invertebrates. Identification and biology of ragwort species are presented in Appendix I.

27 Ragwort species contain pyrrolizidine alkaloids (PAs) which have toxic properties to animals and man.

28 Amongst ragworts only common ragwort is covered by the provisions of the Weeds Act 1959 and this Code of Practice.

Toxicity

29 The proportion of PAs in ragwort varies with growth stage, season and geographical area.

30 The toxic effects of PAs are most apparent in the liver although there is evidence that the PAs themselves are not hepatotoxic but that they may be metabolised in the liver to bind pyrrole derivatives that are toxic.

31 A key feature is that the PAs present in ragwort are not destroyed when the plant is dried or conserved in forage (during grass drying, hay making, haylage and silage production) or when the plant has been treated chemically or culturally for control.

Risk to Animal Health

32 Ragwort poisoning is a frequent cause of plant poisoning to grazing animals in Britain. All animals are at risk from the toxic effects if they consume ragwort by grazing the plant or consuming it in forage.

33 Ragwort poisoning is cumulative and therefore long-term low level ingestion can be dangerous. Signs of ragwort poisoning can be slow to develop, and may not become apparent until animals have been eating it for several weeks or months; signs may even appear after consumption of the plant has ceased.

34 Poisoning can also develop quickly and it is not uncommon for affected animals to die within a few days of showing clinical symptoms. Liver damage is irreversible and there is no effective treatment.

35 A particular feature of ragwort is that the PAs present in the living plant remain toxic in the dead plant i.e. when wilted, dried or conserved in feed and forage. Poor application of control methods that leave dying plants or torn sections of plants in situ can increase the risk to animals.

Risk to Human Health

36 The principal route of exposure to PAs in food is *via* contaminated staple foods i.e. grain, milk, eggs and honey. Where staple foods have been contaminated it is largely confined to economically disadvantaged countries. The risk to human health in the UK from ragwort contamination of staple foods is generally considered to be insignificant.

37 There is concern about the risk to human health associated with hand pulling of ragwort plants as a means of ragwort population control. It is not known if PAs can be absorbed through the skin, although anecdotal evidence indicates that they can. It is therefore advised that suitably protective gloves and trousers be worn when hand pulling and handling ragwort plants.

CONTROL POLICIES

Introduction

38 Where land is affected by ragwort the occupier should make an assessment of the need to control its spread. This section provides guidance on the preparation of control policies, how to assess the risk ragwort poses and the associated need to control the spread of ragwort.

39 Efforts to control the spread of ragwort should be targeted at sites where there is a medium or high risk that spread will adversely affect horses and other grazing animals, the production of feed and forage or other agricultural activities. It is not the intention that ragwort should be eradicated throughout the countryside.

40 Livestock and horse owners should ensure that their stock do not ingest ragwort. Similarly, it is the responsibility of the occupier of land used for forage production to ensure that ragwort is not incorporated in forage. This Code is concerned with preventing the spread of ragwort and does not deal with the need to keep grazing land ragwort free, although many of the control mechanisms described in the Code will be applicable in that situation.

41 Control of ragwort is a requirement under GAEC C (dealing with Under Grazing/Under Management) of Cross Compliance. This is one of the standards consistent with keeping land in "Good Agricultural and Environmental Condition". Cross Compliance is a European Union requirement that farmers have to meet in order to receive the Single Farm Payment (SFP).

Control Policies

42 It is expected that owners, occupiers and managers of private and public land, highways, waterways, railways, conservation and amenity areas and land awaiting development, should put in place policies for the identification, monitoring and appropriate control of ragwort on land under their control. Larger organisations are expected to have written policies to this end and to be able to demonstrate that these policies are being followed.

43 Such policies should take into the account the need for vegetation management, including weed control and identify ragwort as a specific weed that should be controlled wherever it presents a medium to high risk to animal welfare.

44 When considering what is practical owners/occupiers/managers should balance the risk against the time and cost of taking the action, and consider whether the cost of control is proportionate to that risk. For some categories of land, e.g. railway land and trunk roads this might make regular inspection of all land holdings impractical. In such situations complaints should be used to accumulate information on ragwort "hotspots".

45 For example, where grazing stock and/or grassland used for forage production is not at risk and the cost of control is high, then it may not be considered to be reasonably practicable to undertake control. However, if there is a high risk to horses or grazing stock or forage production then even if the costs of control are high, there should be a presumption that action to manage the spread of ragwort will be necessary.

46 Policies should identify the need to adopt control at early stages of growth in order to reduce the risk of seed dispersal and thereby achieve more effective long-term control.

47 Policies should take account of the environmental impact of ragwort control and ensure that due regard is given to the need to protect animal health and maintain biodiversity.

48 Policies should encourage collaboration and co-operation with neighbours to achieve effective control of the spread of ragwort where the presence of ragwort poses a threat to grazing animals and the production of feed and forage.

49 Policies should recognise that one of the most effective means of preventing the spread of ragwort is through good pasture management to control the presence of ragwort. It is not possible in a Code of this nature to provide comprehensive guidance on pasture management. Best practice varies according to specific circumstances and a different approach would be appropriate in different circumstances, e.g. in relation to managed grassland or unimproved semi-natural grassland. Other ragwort control methods include education and awareness raising.

Definition of Risk Category

50 To assist with this decision-making an assessment of the need to control ragwort is recommended, so that for each individual situation the level of risk can be assessed and the need to respond and the appropriate level of response can be determined.

51 This approach identifies three risk categories (detailed in Table 1) which are defined as:

High Risk:

- Ragwort is present and flowering/seeding within 50m of land used for grazing by horses and other animals or land used for feed/forage production.

Medium Risk:

- Ragwort is present within 50m to 100m of land used for grazing by horses and other animals or land used for feed/forage production

Low Risk:

- Ragwort or the land on which it is present is more than 100m from land used for grazing by horses and other animals or land used for feed/forage production.

Table 1 Risk Categories

High Risk Areas	
Definition	Ragwort is present and flowering / seeding within 50m of land used for grazing by horses and other animals or land used for feed/forage production
Situation	Grazing and forage production in the near vicinity.
Objective	To control spread and minimise the risk that ragwort will become established within the grazing/feed producing area.
Action	If flowering / seeding, immediate action is required to remove the hazard to grazing stock by removing the ragwort by levering or pulling. If growth has not reached the flowering / seeding stage or that stage has passed, action should be taken in sufficient time to prevent flowering in the current or next season. In the long-term, aim to reduce ragwort levels by monitoring and adopting suitable control measures.
Control options	Physical, cultural and chemical.

Medium Risk Areas	
Definition	Ragwort is present within 50m to 100m of land used for grazing by horses and other animals or land used for feed/forage production.
Situation	Where grazing animals and/or feed production is taking place and the presence of ragwort within 100 metres may result in seed dispersal and thereby contamination and the spread of ragwort.
Objective	To minimise the risk of seed dispersal by the prevention of seeding.
Action	If flowering / seeding, immediate action is required to remove the hazard to grazing stock by removing the ragwort by levering or pulling. If growth has not reached the flowering / seeding stage or that stage has passed, action should be taken in sufficient time to prevent flowering in the current or next season. In the long-term aim to reduce ragwort levels by monitoring and adopting suitable control measures.
Control options	Physical, cultural, chemical and biological.

Low Risk Areas	
Definition	Ragwort or the land on which it is present is more than 100m from land used for grazing by horses and other animals or land used for feed/forage production.
Situation	No grazing animals or feed production is taking place within 100 m or is likely to become contaminated.
Objective	Ragwort may be tolerated where seed dispersal to High & Medium Risk Areas is not evident.
Action	Monitor the use of land within the locality. If as a result of a change of use this land falls into either the High or Medium Risk category then cultural and/or chemical control will be required to prevent flowering / seeding.
Control options	Cultural, chemical and biological including preventative management.

52 The distances given above are guidelines only and when assessing risk, account should also be taken of particular local circumstances and other relevant factors such as prevailing winds, topography, shelter belts, natural barriers, soil type and vegetation cover of receiving land. Whether or not the density of ragwort is high or low, the risk factor will be determined by the likelihood of it spreading to land used for grazing and/or forage production

Special Provisions For Specific Categories of Land

Set-Aside

53 Land set-aside from agricultural production is a potential source of ragwort infestation and is subject to the provisions of the Weeds Act in the same way as other land.

Organic Farming

54 Where land is farmed organically there will be limitations on the control options that can be used. Further advice should be obtained from the organisations listed at Appendix IV).

Agri-Environment Schemes

55 Agri-environment schemes include Environmentally Sensitive Areas (ESAs), Tir Cymen Habitat Scheme, Tir Gofal and Tir Cynnal.

56 Where ragwort is present on land within an agri-environment agreement and poses a risk to the health and welfare of grazing animals and/or the production of feed or forage it should be adequately controlled.

57 Although individual agreements may limit the options for control, it should not rule out control. Guidance is available from the Assembly's Environment, Planning and Countryside Department (EPCD) Divisional Offices (Appendix II).

Designated sites including Nature Reserves and Sites of Special Scientific Interest (SSSI) and Other European Conservation Sites

58 Several species of ragwort and closely related species occur as native plants on many National and Local Nature Reserves, SSSIs and other sites where biodiversity and wildlife is valued. Some species of ragwort are rare.

59 Management of plant life is crucial to the ecology of nature reserves and SSSIs and in such situations weed control, including the control of common ragwort may be potentially damaging to the nature conservation interests of the site. (Reference: English Nature Common Ragwort Information Note see Appendix III).

60 In such situations the Countryside Council for Wales (CCW) must be consulted in advance of action and consent sought as to the most appropriate control method (Appendix II).

61 On sites where grazing management is required and there is a wildlife interest associated with the ragwort then a risk assessment should be undertaken. If ragwort poisoning becomes a risk then grazing animals should be excluded from the areas for the period of risk, or, the ragwort removed. The risk assessment may take into account the susceptibility of the particular grazing animals (species, breed, age, experience, foraging behaviour), the presence of abundant alternative palatable herbage and prevailing weather conditions.

62 Where sites do not require grassland management by grazing, ragwort may be acceptable providing the presence of such ragwort is not a threat to horses and stock grazing land neighbouring the site, or adjoining land is being used for feed/forage production.

63 The key factor will be the level of ragwort present relative to the risk of seed dispersal contaminating land used for grazing and/or forage production.

64 Emphasis should be placed on ‘preventing’ infestations by management, rather than ‘controlling’ them once they have occurred.

65 Where control of the ragwort population is necessary, cultural control methods are the preferred option.

Scheduled Monuments

66 Control on or removal from land which is protected as a Scheduled Monument under the Ancient Monuments and Archaeological Act 1979 may also require Scheduled Monument Consent (SMC).

67 In such situations Cadw must be consulted and advice sought as to the most appropriate method of control (Appendix II).

Common Land

68 Common land can sometimes be populated by a number of species including common ragwort. Where ragwort is identified as putting at risk animals grazing on the common or to neighbouring land used for grazing and/or feed/forage production, it must be controlled.

69 Responsibility for control lies with the registered owner, lessee or occupier of the land. This would also apply in relation to common land. However, those with commoners' rights would not normally be responsible.

Land Used for Grazing

70 Land used for grazing horses and other animals is the responsibility of the occupier (owner or tenant) of the land.

71 The presence of ragwort within a grazing area can pose a high risk to grazing stock particularly horses which are highly susceptible to the toxic effects of ingested ragwort. Grazing horses on land where ragwort is present is not considered acceptable on animal welfare grounds.

72 Particular attention should be given to the presence of ragwort seedlings which are less visible than the rosettes stage and more likely to be eaten.

73 Where ragwort is identified as posing a medium to high risk to animals, suitable control measures should be taken and where possible animals removed from the source of risk.

Forage Production

74 Grassland conserved for forage production including; hay, haylage, silage and crops grown for dried grass, are at risk from ragwort infestation.

75 Ragwort cannot easily or readily be detected once dried. It remains highly toxic and cannot be easily discarded and is therefore more likely to be eaten and poses a higher risk of poisoning to the animal than in the grazing situation.

76 Any feed or forage that contains ragwort is unsafe to feed to horses and other animals and should be declared 'unfit' as animal feed and be disposed of safely.

77 The Agriculture Act 1970 and the Feeding Stuffs Regulations 2000 govern the sale of animal feed and forage. Regulation 14 makes it an offence to sell any material for use as a feeding stuff which is found, or discovered as a result of analysis, to be unwholesome for or dangerous to any farmed animal, pet animal or human being.

78 Trading Standards should be notified if feed stuffs are found to contain ragwort as an offence may have been committed.

79 The economic loss of a crop of feed or forage has serious consequences for the producer who will be unable to obtain an income from the crop but has incurred the cost of production.

80 It is essential that ragwort must not be permitted to infest land destined for feed or forage production.

Amenity Grassland

81 Amenity grasslands which includes sports grounds, playing fields, village greens and grassed areas around buildings and gardens, are usually well managed and usually pose a low risk of ragwort contaminating grazing land and land used for feed/forage production.

82 However, where land is less well managed it can pose a risk if ragwort is allowed to proliferate in areas not frequently cut and/or on the perimeter of the amenity area. In such situations where ragwort poses a risk of contaminating neighbouring land used for grazing and/or feed/forage production then effective control measures should be taken to prevent the spread of ragwort.

83 Control methods should take into account public access and safety and a suitably sufficient risk assessment must be undertaken prior to control.

Highways

84 Ragwort is frequently found growing by the side of highways including: motorways, trunk roads, other public roads and private roads. It can pose a serious risk of contaminating grazing land and land used for feed/forage production within the locality. Where ragwort is present on roadside verges and the spread of ragwort poses a medium or high risk to grazing animals and/or feed/forage production, it must be controlled.

85 The control of roadside vegetation including common ragwort is the responsibility of the Welsh Assembly Government Transport Directorate in Wales, in the case of motorways and trunk roads, and the Local Highway Authority in respect of all other public roads. Private roads are the responsibility of whoever owns them.

86 Particular problems arise where road improvements or other disturbances of the highway verge have occurred. Special measures that prevent weed species (including ragwort) becoming established should be considered in the early years of management of new highway verges to prevent the establishment of ragwort.

87 Ragwort control procedures on highways have implications for the health and safety of operatives and attention is drawn to the section in this Code relating to Health and Safety Requirements. For dual carriageways with speed limits exceeding 50 mph the requirements of Chapter 8 of the Traffic Signs Manual and “Guidance for Safer Temporary Traffic Management on High Speed Roads

– Good Working Practice", published by the Transport Research Laboratory (Appendix III), must be followed.

Railways

88 Ragwort is often found growing by the side of railway lines and, due to the size of the railway network, can pose a risk of contaminating grazing land and land used for feed/forage production within the locality. Similarly, the number of neighbours surrounding the 30,000 hectare network means that ragwort will undoubtedly spread on to railway property.

89 The control of vegetation on railway land, including the control of ragwort, is the responsibility of Network Rail and is undertaken to ensure the risks posed by vegetation, to trains, railway personnel and the travelling public are reduced to as low as is reasonably practicable. Private railways are the responsibility of whoever owns them. Ragwort is controlled on a reactive basis, dealing with infestations on a site-specific basis.

90 Where ragwort is present on railway land and the spread of ragwort poses a medium or high risk to grazing animals and/or feed/forage production it must be controlled. Control of ragwort on surfaces belonging to statutory undertakers operating railways may require the carrying out of special safety procedures, including temporary track closures. The work may fall to be co-ordinated with other activities in order to avoid excessive costs and inconvenience to passengers. Personnel involved have access to safety and environmental information to ensure that the control activities do not compromise the safe running of the railway or contravene environmental legislation. Accordingly, where someone is concerned about ragwort on railway land it would be helpful to discuss with statutory undertakers what would be a reasonable period of time for clearance work to be carried out before making a complaint to the relevant Welsh Assembly Government office.

Aquatic Areas

91 Land immediately adjacent to water (this includes rivers, streams, brooks, canals, ponds and reservoirs) can be a source of ragwort, and in particular the rarer species. Ragwort in these areas generally presents a low risk.

92 Where ragwort is present on land adjacent to waterways and the spread of ragwort poses a risk to grazing animals and/or feed/forage production it must be controlled.

93 The Food and Environment Protection Act 1985 places a special obligation on all pesticide users to prevent pollution of water. No pesticides may be used in or near water, unless the approval specifically allows such use.

Woodland and Forestry

94 Ragwort in woodland and forestry generally represents a low risk to grazing animals and to feed and forage production.

95 Where ragwort is present and the spread of ragwort poses a medium or high risk to grazing animals and/or feed/forage production then it must be controlled.

Development, Waste and Derelict Land

96 This category includes brown field sites awaiting development, abandoned land, and land not utilised or managed surrounding development areas.

97 Land within the urban environment generally represents a low risk to grazing animals and to feed and forage production.

98 It is expected that owners, occupiers and managers of such land will have in place policies for the identification, monitoring and control of ragwort on land under their control.

99 Where ragwort is present on development, waste and neglected land and the spread of ragwort poses a risk to grazing animals and/or feed/forage production, then it must be controlled.

Defence Land

100 The Defence Estates (an Executive Agency of the Ministry of Defence), administer the defence estate and are responsible for ensuring that the appropriate standards of weed control are maintained on defence land under its control

101 Where ragwort is present on defence land and the spread of ragwort poses a risk to grazing animals and/or feed/forage production then it must be controlled. The Defence Estates will not control ragwort where there is unexploded ordnance present.

NOTIFICATION

102 Where ragwort poses a risk and there is a need to control it, in the first instance contact the owner/occupier or relevant body. Organisations that control or own land are listed in Table 2.

103 The Weeds Act 1959 requires that owners/occupiers or relevant bodies take steps to control the spread of ragwort.

Table 2 Organisations that own and/or control land

Location	**Owner/Occupier**
Private & commercial property & land & private roads	Owner/Occupier
Agricultural land & livestock other than animals kept for non-agricultural business or recreational purposes	Owner/Occupier
Motorways & trunk roads	Welsh Assembly Government Transport Directorate or relevant trunk road agency
All other public roads	Local Highway Authority
Railway Land	Network Rail
Canals & Towpaths	British Waterways
National Nature Reserves/Sites of Special Scientific Interest	Countryside Council for Wales/Owner/Occupier
Local Nature Reserves	Local Authority/Owner/Occupier
Common Areas/Common Land	Local Authority/Owner
Ministry of Defence Land	MoD
Development Land	Owner/Occupier
Parish/Town/Community Council Land	Parish/Town/Community Council
Private Woodland/Forestry	Owner/Occupier
Forestry	Forestry Commission Wales

104 Whilst the majority of canals & towpaths are owned by British Waterways and railway land by Network Rail, there are exceptions.

105 Where notification fails to secure any improvement or a land owner/occupier or relevant body cannot be identified, i.e. action to control the spread of ragwort, the local Department for Environment, Planning and Countryside Divisional Office should be notified (Appendix II).

CONTROL METHODS

Introduction

106 Once it has been decided that there is a need to control ragwort by using the risk of spread assessments (Table 1 Risk Categories) there are three types of control method: cultural, chemical and biological. Within each of these types

different methods can be employed depending on the location, the level of infestation and the extent of control required.

107 A risk assessment of using the different types of control should be made to decide the most appropriate method of control to prevent the spread of ragwort under your specific circumstances. The decision tree in Figure 1 will assist with selecting the most appropriate method of control.

Preventative Land Management

108 This section provides information on the different techniques that are available to control the spread of ragwort including land management, as preventative land management can be as important as active control methods to stop ragwort from becoming established.

109 Improved grassland management to achieve a dense ground cover of grasses will discourage the establishment of ragwort. Where an open sward is created via either over-grazing or under-grazing, ragwort and other weeds are more likely to become established. However, this may not be an appropriate policy on sites where the grassland is botanically diverse. In such instances the maintenance of this diversity is usually dependent on a more open grass sward.

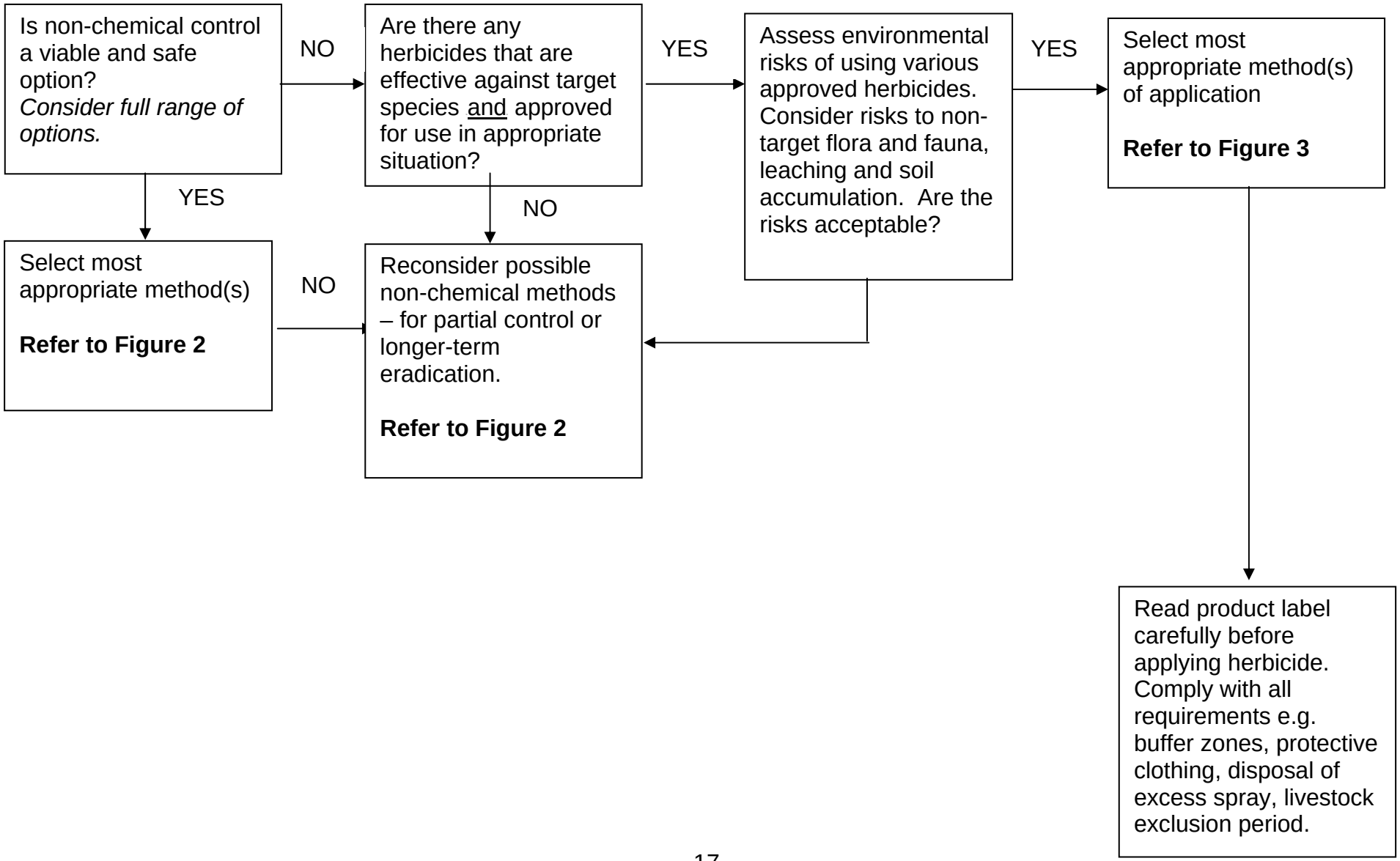
110 A dense sward can help prevent ragwort from germinating, but once established dense cover does not impede ragwort growth. However, once the soil is disturbed by vehicles or excavations there is an increased risk of ragwort establishment and subsequent control may be necessary.

111 Any damage to the sward by animal grazing (poaching damage by hooves) and surface damage caused by vehicles may encourage ragwort seeds to germinate and, in an open sward, to become established.

112 Land subject to rabbit damage (scratchings) provides ideal conditions for ragwort germination leading to ragwort infestation. In situations where there is a need to control ragwort it may be necessary to control rabbit populations to achieve effective long-term ragwort control.

113 Wherever possible uncultivated land with low levels of ragwort should remain undisturbed.

Figure 1. Decision Tree to Assist Selecting the Most Appropriate Control Method



Cultural

114 There are several cultural methods to control the spread of ragwort which include grazing, pulling and cutting. Figure 2 will assist with selecting the most appropriate method of cultural control.

Grazing

115 All grazing animals are susceptible to the toxic effects of ragwort and therefore the control of ragwort by grazing sheep, goats or other livestock is not recommended on animal welfare grounds.

Pulling and levering

116 Pulling or levering up plants can prevent seed spread and can give long-term control although any root fragments not removed can produce weak growth. Hand pulling is appropriate for smaller areas but for larger areas the use of machine pulling should be considered. Various hand tools are available for levering and best results are achieved when the soil is damp and before ragwort has seeded. On anything other than small areas of land, hand pulling should be regarded primarily as an emergency method of control.

117 Success depends upon spotting the plants and effectiveness on removing the plant root. Machine pulling requires a height difference between the ragwort and other plants. Best results for hand and machine pulling are achieved when the soil is damp. Repeat treatment is usually required.

118 A combination of manual/mechanical pulling or levering and reducing disturbance to soil can be effective against ragwort, if repeated over a number of years, without having to resort to herbicide use.

119 When pulling or levering and handling ragwort plants (fresh and dried) the body must be protected by wearing suitable protective clothing to prevent ragwort plants coming into contact with the skin.

120 Pulled or lifted plants must be disposed of safely (see section titled 'Disposal of ragwort', page 33) as wilted plants can still be easily consumed and remain toxic.

Cutting

121 Cutting is a control method of last resort and should only be used to reduce seed production and dispersal where other more effective control methods cannot be used.

122 Cutting stimulates growth and plants subsequently re-flower later in the season.

123 Cutting and stem removal at the early flowering stage reduces seed production but does not destroy the plant, turning it from a biennial into a perennial habit

and therefore repeat treatments will be required to prevent the ragwort from seeding.

124 Cut plants left lying in the field are a serious risk to grazing animals, as they remain toxic, are more likely to be eaten and may still set seed.

125 Where grazing animals have access to fields with ragwort, which has been cut, plants must be removed and safely disposed of before returning the grazing animals (see section titled 'Disposal of ragwort').

Burners

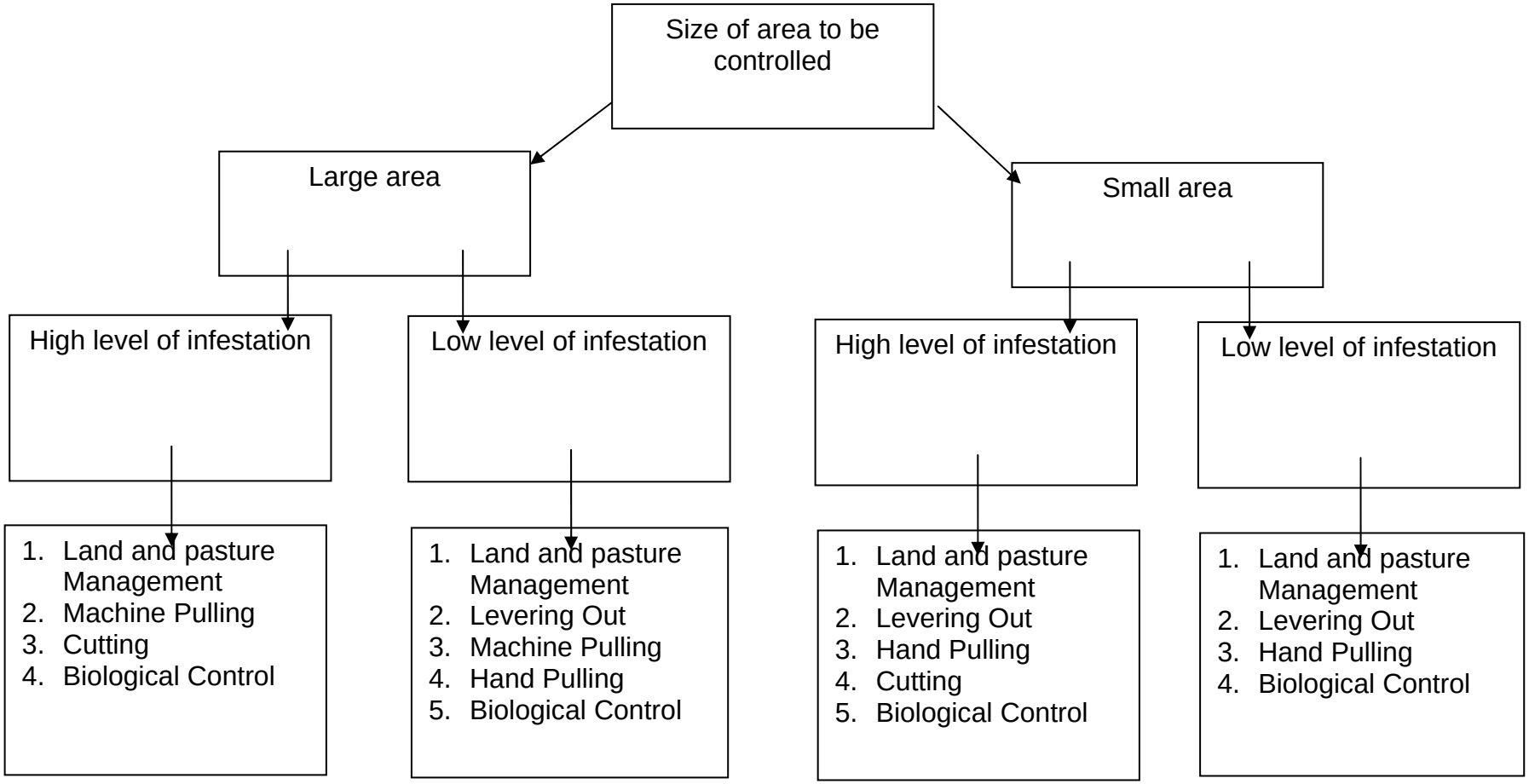
126 Spot burners (hand held flame guns) have been used at rosette stage with mixed success ranging from 93% kill of ragwort seeding plants to rapid re-growth occurring.

127 Consideration needs to be given to the potential to cause damage to surrounding vegetation and the risks of fire and to operator safety.

128 In most circumstances the use of spot burners is unlikely to be suitable except on hard surfaces and paved areas.

129 Where the use of spot burners is a preferred method of control a suitable and sufficient risk assessment must be undertaken prior to use.

<u>Figure 2</u>. Selecting the Most Appropriate Cultural and Biological Control According to Size of Area and Level of Infestation



Chemical

Use of Herbicides

130 Only use herbicides after a risk assessment has been completed. The risk assessment must include consideration of any potential effects on the environment and on human health. Risk assessments should also consider the likely ecological impacts of taking no action, which can sometimes outweigh any negative effects of a herbicide treatment.

131 Herbicides can be a time efficient and effective method of controlling ragwort. Although 100% kill is not always achieved with one application, an annual chemical control programme will generally control ragwort infestations providing no seed is entering from outside the treated area. The optimum time for herbicide application is at the rosette stage.

132 Only herbicides and uses approved under the Control of Pesticides Regulations 1986 (COPR) as amended by the Control of Pesticides (Amendment) Regulations 1997 – or, for products containing more recently available active ingredients, EC Directive 91/414/EEC (the 'Authorisations Directive') and the Plant Protection Products Regulations 1995 (PPPR) as amended by the Plant Protection Products (Basic Conditions) Regulations 1997 (PPP(BC)R) can legally be sold, supplied, stored, advertised and used. Current lists of approved products can be found on the Pesticide Safety Directorate (PSD) website at www.pesticides.gov.uk. All herbicides must have an appropriate full or 'off-label' approval for use in a relevant situation.

133 Always read the product label before using a herbicide and comply with all statutory conditions.

134 Where a herbicide is to be applied under the terms of an off-label approval, users must obtain and read the relevant Notice of Approval (published by Defra). Users should be aware that there is a risk that pesticides used under an 'off label approval may not be as effective.

135 Because herbicides are not equally effective at all stages of plant growth, repeated treatments at different times of year are recommended for optimum control. However, the time of year that a herbicide is applied is a critical consideration, which may be constrained by legal requirements stipulated on the product label. Decisions should take into account the efficacy of the herbicide against the target species (e.g. some herbicides are more effective when applied to actively growing weeds) and any probable impacts of different timings on other non-target species at that site.

136 Two problems associated with the use of herbicides are very important and could constrain their wide use. They damage non-target species and there is increased palatability of ragwort to animals after spraying.

Legal Restrictions

137 The purchase, transport, use and storage of agrochemicals are regulated by Part III of the Food and Environment Protection Act 1985, Control of Pesticides Regulations

1986 (as amended) Plant Protection Products (Basic Conditions) Regulations 1997 and the Health and Safety at Work Act 1974.

138 The Control of Substances Hazardous to Health (COSHH) Regulations 2002, require that pesticides (including herbicides) should only be used where necessary, and where the benefits significantly outweigh the risks to human health and the environment. Non-chemical control options must, therefore, be considered and herbicides should only be used in situations where alternatives do not exist, or are impractical or likely to be inadequate.

139 The Food and Environment Protection Act 1985, by means of control of pesticide regulations made under the Act, provides specific controls to be exerted over the pollution of water by pesticides.

140 Spraying should only be carried out by a competent person and in accordance with the above legislation. Persons applying pesticides for agricultural use may also need to hold recognised certificates of competence. Surplus chemicals should be disposed of according to the Code of Practice for Using Plant Protection Products.

Grazing Restrictions

141 The application of herbicides to grazing land will result in grazing restrictions. Each product has a specified grazing interval, i.e. the period between treatment and grazing. The grazing interval provides sufficient time for the applied product to work on the growing plants and does not indicate that it is safe to graze.

142 It is only safe to graze fields once any ragwort and other toxic weeds present have disintegrated and are not accessible to grazing animals. The same principle also applies to grassland treated, which is intended to be conserved for hay and haylage.

Environmental Restrictions

143 The use of herbicides to control ragwort will affect other plant species, within the treated area. Areas protected by legislation, e.g. SSSIs and agri-environment schemes, also restrict the use of certain chemicals and the relevant authority should be consulted prior to operations. For relevant authority refer to specific land use.

Methods of Application

144 Efficacy and environmental safety are directly affected by the method of application, which must comply with statutory requirements.

145 Effective targeting of herbicides is important, particularly when non-selective herbicides are used. Non-selective, translocated herbicides present the highest risk to non-target plants.

The method used to apply a herbicide will be influenced by:

- the extent and distribution of the target species
- height and structure of the target species
- height, structure and sensitivity of surrounding/adjacent non-target species

- approval and label requirements

146 The most widely used type of hand-held sprayer is the knapsack sprayer, which is suitable for spot-treatment of ragwort on small areas and on very rough or steep terrain.

147 Sprayers mounted on tractors or ATVs are more suitable for larger areas of relatively even ground.

148 Hand held weed-wipers can be used advantageously early season to dab herbicide on to rosettes. Weed-wipers provide a method for the targeted treatment of weeds that are taller (at least 10 cm taller) than the associated non-target vegetation. Weed-wipers are available for different scales of operation – from small hand held wipers to large tractor-mounted equipment.

149 The cost of the different treatments can vary. If a landowner decides that spraying is required, it may be prudent to contact the National Association of Agricultural Contractors (NAAC) (Appendix IV), who can provide a list of suitably qualified contractors.

Training and Certification of Spray Operators

150 Contractors and others applying pesticides to land not owned or occupied by them, or their employer, must hold a recognised Certificate of Competence (unless born before 1965 or working under the direct supervision of a certificate holder).

Health and Safety

151 All herbicides are potentially hazardous. The use of such products should be prevented or, where this is not reasonably practicable, controlled. A risk assessment must be carried out before application. The risk assessment should determine the risks to operators and other people (including members of the public) and should specify the control measures required to adequately control those risks. Any measures e.g. substitution of the product (by a less hazardous one), engineering controls etc deemed appropriate and necessary by risk assessment should be implemented and protective equipment required by and stipulated on the product label should be worn. Information relating to first aid and medical treatment in the event of accidental exposure to the chemical is also given on the product label.

Environmental Safety

152 An evaluation of environmental risks is essential wherever pesticides are used and should always consider both short and long-term, local and remote effects, impacts on animals as well as plants and possible indirect effects (e.g. through destruction of nesting sites, deoxygenation of ponds caused by organisms decomposing, dead vegetation etc.).

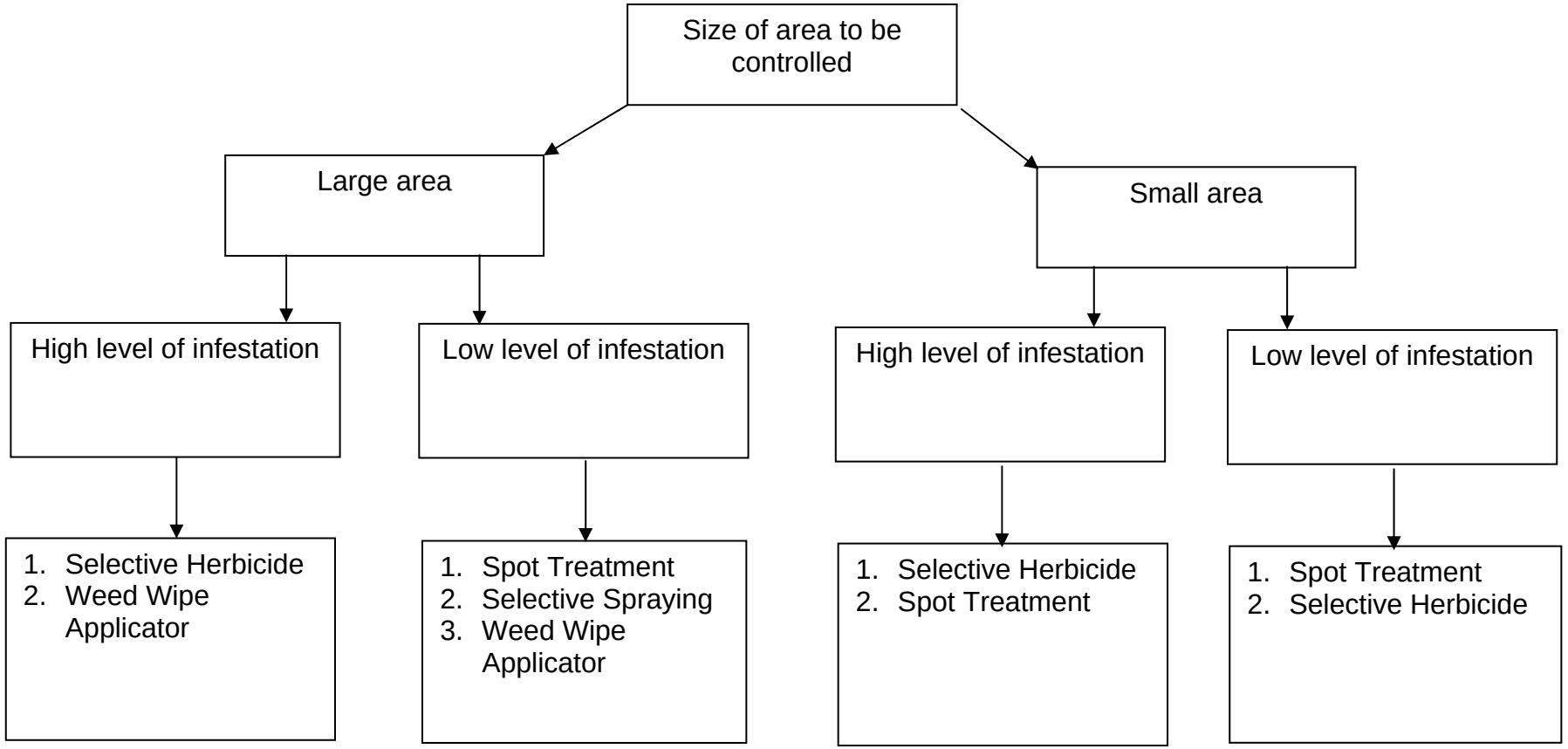
153 To minimise the effects of herbicides on non-target species:

- use a selective herbicide that is less damaging to non-target species

- leave an unsprayed buffer zone between treated and vulnerable species/habitats
- avoid spraying in unsuitable weather, e.g. when wind speed is greater than Beaufort Force 2 or on very calm, warm days
- avoid fine sprays – use medium-coarse droplet nozzles
- keep spray nozzles as close as possible to target plants
- spot treat, if possible, and use a guard on the sprayer lance to more effectively target sprays and reduce drift

154 Figure 3 will assist with selecting the most appropriate method of chemical control.

Figure 3. Decision Tree to Assist Selecting the Most Appropriate Herbicide Treatment According to Size of Area and Level of Infestation



Biological

155 Biological control is aimed at controlling ragwort by using the plant's natural enemies to lower its density, thereby suppressing ragwort populations and allowing native species to re-establish.

156 Many species feed on ragwort including; cinnabar moth (*Tyria jacobaea*), ragwort flea beetle (*Longitarsus jacobaea*) and ragwort seedfly (*Pegohylemia seneciella*). Other potential biological control agents include several fungal pathogens (rust diseases). None of these are fatal to ragwort populations.

157 The introduction of a biological control agent has a potential advantage in areas where chemical/mechanical control is unachievable or undesirable. However, the disadvantage is that it can be difficult to maintain sufficient populations to provide adequate control and may only result in a reduction rather than a control of spread. Therefore this technique can only be used as part of a long-term strategy.

Summary of Control Methods

158 A summary of the different control methods is presented in Table 3. Consideration should be given to combining more than one control/management technique. The cost categories within the table are less applicable to linear land units such as roads and highways.

Table 3. Summary of control methods

Method	Labour requirement	Cost	Prevention of flowering	Success of control - long term	Grazing removal period (days)	Number of treatments required per year	Repeat time scale (years)	Optimum time of treatment	Suitable for large areas	Suitable for high ragwort infestations	Remarks
Cutting	*	*	**	*	0(1)	1/2	1	F	***	***	Emergency treatment to prevent seeding. It is essential to cut before seed heads are mature & must be followed with a control technique
Levering out	***	*	**	**	0(1)	2	1	F	*	*	Tools available for digging up plants. Best results when soil is wet. Very dependent on spotting plants, some may be missed requiring further treatment.

Herbicide citronella oil derived product (3)	***	***	***	***	7(2)	1-2	1	R And F	*	*	Very dependent on spotting plants, resulting in some being missed. Large plants may need respraying two weeks later. Will control broad-leaved plants.
Herbicide selective sparying (3)	*	**	***	***	21(2)	1-2	1	R	***	***	Most products will kill other broad-leaved plants sprayed.
Herbicide spot treatment (3)	***	**	***	***	21(2)	1-2	1	R Or F	***	*	Very dependent on spotting plants, some may be missed requiring further treatment.

Herbicide weed wipes (3)	*	**	**	**	21(2)	1-2	1	F	***	***	Only tall ragwort plants will be affected. Cost of machine hire dependent on source.
Pulling by hand	***	*	***	**	0(1)	2	1	F	**	*	Gloves must be worn. Best results when soil is wet. Very dependent on spotting plants, some may be missed requiring further treatment.
Pulling by machine	*	**	***	**	0(1)	2	1	F	***	***	Selects plants for pulling on height difference & leaves shorter plants.

Biological	*	***	*	?	N/A	1	1	R Or F	***	***	Biological control using the Cinnabar Moth is at the early stages of developmen t in the UK.

Key: * Low ** Medium *** High: R – When rosettes start growing; F – early summer before flower heads mature; (1) – Provided ragwort cuttings are removed;
(2) These timings are only a guide – follow the manufacturer's guidelines; (3) Always follow the manufacturer's guidelines.

HEALTH AND SAFETY REQUIREMENTS

With Respect to Handling Ragwort Plants

159 Ragwort is a toxic plant and suitable precautions must be taken when handling live and dead plants.

160 When handling ragwort plants (fresh and dried) hands must be protected by wearing sturdy waterproof gardening type gloves and arms and legs covered to prevent ragwort plants coming into contact with the skin.

161 Should your skin come into contact with ragwort you should wash the area thoroughly in warm soapy water.

162 Suitable facemasks should be made available so that they may be worn to avoid the inhalation of ragwort pollen and to reduce the risk of hayfever.

With Respect to Location

163 Care must also be taken to ensure operator safety when undertaking ragwort clearance, this is particularly important when clearance takes place on road verges and other public areas accessed by motor vehicles.

164 The use of volunteers to control ragwort on roadside verges and ‘common’ or ‘public’ land can be effective in assisting the competent authority to ensure the necessary control of the spread of ragwort, where it has been identified to be a specific problem that requires control measures to be taken and where it is safe to do so.

165 In using volunteers it is essential that the prior notification and authority of the relevant owner/occupier of the land is obtained, prior to any volunteer action being undertaken. Volunteer action will not be possible on land owned by Network Rail or on motorways or trunk roads with restricted access.

166 Railway land is the responsibility of the railway undertaker concerned. Unauthorised persons must not under any circumstances enter nor purport to authorise entry by any other person. Only the railway undertaker concerned is in a position to authorise entry by persons in possession of appropriate railway safety certification meeting the requirements of the undertakers’ Railway Safety Case approved by the Railways (Safety Case) Regulations 2000 (as amended). A failure to comply with this instruction is likely to place the persons concerned in breach of duties under the Health and Safety at Work etc Act 1974. The person authorising entry may in such circumstances also render themselves liable to prosecution in their personal capacity.

167 It is also essential to ensure that the volunteers are competent to undertake the task, have adequate training (including road safety) and supervision and are not a danger to themselves or to others. This is particularly important when clearing ragwort from roadside verges on the public highway.

Safety

168 It is essential that whoever is responsible for the use of volunteers ensures the safety of all volunteers and other members of the public, which their activities may effect.

169 This can only be achieved by undertaking a sufficient and suitable risk assessment which:

- identifies the hazards;
- decides who may be harmed by them;
- evaluates the risk and decides whether the existing precautions are adequate or whether more should be done;
- records the findings;
- reviews the assessment and revises it if necessary.

170 Further guidance is available from the Health & Safety Executive on undertaking Risk Assessments (Appendix II).

Prior Authority

171 Clearance of ragwort from private land should only be undertaken with the prior authority of the owner or occupier of the land to be cleared. Access to land without prior authority would amount to trespass and could lead to a charge of criminal damage. It is also an offence under the Wildlife and Countryside Act 1981 to uproot any wild plant, including ragwort, without the landowner's permission.

172 Clearance of ragwort on public land should only be undertaken with the prior authority of the relevant public body responsible for the management of that land, i.e. parish council, town council, local authority or other public body.

173 Clearance of ragwort from the public highway, i.e. road side verges, should only be undertaken with the prior notification and authority of the relevant local highway authority, i.e. normally the Highways Department of the County Council.

174 Attempts must <u>not</u> be made to identify or clear ragwort on motorways and trunk roads, which are the responsibility of the Welsh Assembly Government Transport Directorate and railway land which is the responsibility of Network Rail.

175 On motorways, high speed dual carriageways and other roads where the speed limit exceeds 50 mph, special traffic management requirements are called for under the terms of the Welsh Assembly Government Transport Directorate document Chapter 8 of the Traffic Signs Manual and "Guidance for Safer Temporary Traffic Management", published by the Transport Research Laboratory (Appendix III).

Visibility

176 When digging or pulling ragwort adjacent to a public highway, i.e. roadside verge, public footpath, bridleway or byway open to all traffic, it is essential that you can be seen by other road/highway users.

177 You should therefore wear high visibility clothing and generally work facing the traffic.

178 Basic road safety training should be provided to raise the awareness of road safety hazards.

179 You should not attempt to dig or pull ragwort in poor visibility or during the hours of darkness on roads.

Vehicles

180 Any vehicles used to transport volunteers to the location of ragwort control must be parked safely and must not be parked in such a way as to obstruct the public highway. Any vehicles used on roadside operations require the correct livery and should be signed in accordance with the requirements of Chapter 8 of the Traffic Signs Manual and "Guidance for Safer Temporary Traffic Management on High Speed Roads – Good Working Practice".

Warning Signs

181 The standard Roadworks signing should be set up in accordance with standard practice governing the type of road as set out in Chapter 8 of the Traffic Signs Manual.

182 On Trunk Roads and Motorways different rules apply and traffic signing needs to be approved by the Trunk Road Agent and Police prior to being erected or works beginning.

DISPOSAL OF RAGWORT

Introduction

183 The safe disposal of pulled or cut ragwort plants is an important part of ragwort control. It should be remembered that cut and pulled plants can still set seed and that all parts of the ragwort plant remain toxic when treated or wilted and continue to pose a risk to horses and other grazing stock.

184 Pulled, levered or cut plants must be disposed of safely and in accordance with the following guidance.

Collection

185 Plants should be collected and placed in plastic bags, which can be sealed and disposed of by incineration or landfill.

Disposal

186 Ragwort plants should be disposed of by incineration, controlled burning or landfill. Ragwort should not be recycled as garden waste or compost.

187 When incinerated this must be undertaken in accordance with The Air Code (Appendix III) and Local Byelaws.

188 When sent to landfill this must be to a local authority approved facility.

189 Contact the Environmental Services Department of your Local Authority to identify the nearest waste reception centre.

APPENDIX I

IDENTIFICATION AND BIOLOGY OF COMMON RAGWORT (*SENECIO JACOBAEA*)

Identification

Common Ragwort (*Senecio jacobaea*) is an erect plant usually 30-90cm high, but may exceed 100cm. The stems are tough and often tinged red near the base, but brighter green and branched above the middle. A basal rosette of leaves usually dies before flowering but the stem leaves persist. They are deeply dissected, with irregular, jagged-edged lobes. All the leaves are dark green and rather tough and may be sparsely hairy on the lower side. The inflorescence is a conspicuous, large, flat-topped head of densely packed yellow flowers with ray florets and disc florets, all of which are bright yellow. The seeds are borne singly and have a downy appendage making them readily dispersible.

Guidance on the identification of Common Ragwort is available from Defra Publications 'Identification of Injurious Weeds' (PB 4192) (Appendix III) and Common Ragwort (Senecio jacobaea) – towards a Ragwort management strategy English Nature Information Note (English Nature 2003).

Biology

Common ragwort is normally a biennial (rosette 1st year and flowering 2nd year). During its first year of growth it establishes a rosette of basal leaves and overwinters in this way. During the second year the rosette sends up a single leafy stem, up to one metre in height, which is unbranched and produces numerous flower heads at the top. The flower heads are carried in a large flat-topped cluster. Flowering usually occurs from June until late October after which the plant dies.

Common ragwort can also behave as perennial (flowering every year) after damage to the crown such as cutting, grazing, hoof damage, damage by machinery and following hand pulling.

Distribution

Common ragwort is widespread throughout the UK and can be found on wasteland, development land, meadows, pastures, sand dunes, roadside verges, railway land, amenity land, conservation areas, set-aside, woodland and grazing land.

Common ragwort may also be found on land used for grazing horses and other stock. Poor quality and poorly managed horse pastures are particularly susceptible to ragwort infestations and every effort should be made to control ragwort and improve pasture management in these situations.

Habitat

Common ragwort can be found over a large range of soil types and climatic conditions and can be characteristic of badly managed grasslands, where trampling

breaks the sward, where patches of turf have died in drought or where there is over or under grazing. However, well-managed dry parched acid/calcareous grasslands may naturally contain frequent ragwort.

Marsh ragwort (*Senecio aquaticus*) is locally abundant in wet areas of fields, wetlands, streamsides, ditch banks and marshy grasslands. Hoary ragwort (*Senecio erucifolius*) occurs mainly on roadsides, semi-natural meadows and field boundaries. Oxford ragwort (*Senecio squalidus*) grows widely on roadsides, railway land, old walls and unmanaged land and Welsh Ragwort (*Senecio cambrensis*) grows on roadsides in North Wales.

Population

Seed germination and seedling establishment is highly variable. In closed sward pastures ragwort does not become established easily, but where it becomes established it is an effective competitor at the rosette stage where it is able to cover and suppress neighbouring plants.

Highest rates of establishment and survival are in open habitats (soil and canopy) which favour seedling establishment. Disturbance to grass verges, embankments and woodland areas which leads to open soil are also favourable conditions for seedling establishment.

APPENDIX II

GOVERNMENT DEPARTMENTS, AGENCIES & STATUTORY AUTHORITIES

British Waterways
Navigation RoadNorthwichCheshireCW8 1BH
Tel: 01606 723800
Fax: 01606 871471
Website: http://www.britishwaterways.co.uk

Countryside Council for Wales
Maes-y-ffynnon
Penrhosgarnedd
Bangor
Gwynedd
LL57 2DW
Tel: 0845 1306229
Website: http://www.ccw.gov.uk/index.cfm
Email: enquiries@ccw.gov.uk

Defence Estates (Ministry of Defence)
Head Office
Kingston Road
Sutton Coalfield
West Midlands
B75 7RL
Tel: 0121 311 2140
Website: http://www.defence-estates.mod.uk

Forestry Commission Wales
Victoria House
Victoria Terrace
Aberystwyth
Ceredigion
SY23 2DQ
Tel: 0845 604 0845
Fax: 01970 625282
Website: http://www.forestry.gov.uk/wales
Email: fcwales@forestry.gsi.gov.uk

Cadw
Welsh Assembly Government
Plas Carew Unit 5/7 Cefn Coed
Parc Nantgarw
Cardiff
CF15 7QQ
Tel: 01443 336000
Fax: 01443 336001
Website: http://www.cadw.wales.gov.uk
Email: cadw@wales.gsi.gov.uk

Blaenau Gwent County Borough Council
Municipal Offices
Civic Centre
Ebbw Vale
NP23 6XB
Tel: 01495 350555

Bridgend County Borough Council
Civic Offices
Angel Street
Bridgend
CF31 4WB
Tel: 01656 643643

Caerphilly County Borough Council
Nelson Road
Tredomen
Hengoed
Ystrad Mynach
CF82 7WF
Tel: 01443 815588

Cardiff County Council
County Hall
Atlantic Wharf
Cardiff
CF10 4UW
Tel: 029 2087 2087

Carmarthenshire County Council
County Hall
Carmarthen
Carmarthenshire
SA31 1JP
Tel: 01267 234567

Ceredigion County Council
Penmorfa
Aberaeron
Ceredigion
SA46 0PA
Tel: 01545 570881

Conwy County Borough Council
Bodlondeb
Conwy
LL32 8DU
Tel: 01492 574000

Denbighshire County Council
Council Offices
Wynnstay Road
Ruthin
Denbighshire
LL15 1YN
Tel: 01824 706000

Flintshire County Council
County Hall
Mold
Flintshire
CH7 6NB
Tel: 01352 752121

Cyngor Gwynedd
Pencadlys
Stryd y Jêl
Caernarfon
Gwynedd
LL55 1SH
Tel: 01286 672255

Cyngor Sir Ynys Môn
Swyddfeydd y Cyngor
Llangefni
Ynys Môn
LL77 7TW
Tel: 01248 750057

Merthyr Tydfil County Borough Council
Civic Centre
Castle Street
Merthyr Tydfil
CF47 8AN
Tel: 01685 725000

Monmouthshire County Council
County Hall
Cwmbran
NP44 2XH
Tel: 01633 644644

Neath Port Talbot County Borough Council
Civic Centre
Port Talbot
SA13 1PJ
Tel: 01639 763333

Newport City Council
Civic Centre
Newport
NP20 4UR
Tel: 01633 656656

Pembrokeshire County Council
Cambria House
Haverfordwest
Pembrokeshire
SA61 1TP
Tel: 01437 764551

Powys County Council
County Hall
Llandrindod Wells
Powys
LD1 5LG
Tel: 01597 826000

Rhondda Cynon Taff County Borough Council
The Pavilions
Cambrian Park
Clydach Vale
Tonypandy
CF40 2XX
Tel: 01443 424000

City and County of Swansea
County Hall
Oystermouth Road
Swansea
SA1 3SN
Tel: 01792 636000

Torfaen County Borough Council
Civic Centre
Pontypool
Torfaen
NP4 6YB
Tel: 01495 762200

Vale of Glamorgan County Council
Civic Offices
Holton Road
Barry
Vale of Glamorgan
CF63 4RU
Tel: 01446 700111

Wrexham County Borough Council
The Guildhall
Wrexham
LL11 1AY
Tel: 01978 292000

Plant Health and Biotechnology Branch
Food and Market Development Division
Welsh Assembly Government
Cathays Park
Cardiff
CF10 3NQ
Tel: 029 2082 5773
Fax: 029 2082 5121
Email: planthealthandbiotech@wales.gsi.gov.uk

Caernarfon Divisional Office
Welsh Assembly Government
Department for Environment, Planning and Countryside (EPCD)
Penrallt
Caernarfon
Gwynedd
LL55 1EP
Tel: 01286 674144

Areas Covered:
Anglesey, Conwy, Denbighshire, Flintshire, Gwynedd, Wrexham.

Carmarthen Divisional Office
Welsh Assembly Government
Department for Environment, Planning and Countryside (EPCD)
Government Buildings
Picton Terrace
Carmarthen
Carmarthenshire
SA31 3BT
Tel: 01267 225300

Areas Covered:
Ceredigion, Carmarthenshire, Pembrokeshire

Llandrindod Wells Divisional Office
Welsh Assembly Government
Department for Environment, Planning and Countryside (EPCD)
Government Buildings
Spa Road East
Llandrindod Wells
Powys
LD1 5HA
Tel: 01597 823777

Areas Covered:
Blaenau Gwent, Bridgend, Caerphilly, Cardiff, Merthyr Tydfil, Monmouthshire, Neath / Port Talbot, Newport, Powys, Rhondda Cynon Taf, Swansea, Torfaen, Vale of Glamorgan.

Welsh/English Border areas

Department for Environment, Food and Rural Affairs (DEFRA)

Bristol Rural Development Service
Defra, Block 3, Government Buildings
Burghill Road
Westbury-on-Trym
Bristol
BS10 6NJ
Tel: 0117 959 1000
Email: enquiries.southwest@defra.gsi.gov.uk

Areas covered:
Avon, Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Cornwall, Devon, Dorset, East Sussex, Essex, Gloucestershire, Hampshire, Hereford & Worcester, Hertfordshire, Isle of Wight, Isles of Scilly, Kent, London Boroughs, Norfolk, Oxfordshire, Shropshire, Somerset, Staffordshire, Suffolk, Surrey, Warwickshire, West Midlands, West Sussex, Wiltshire

Crewe Rural Development Service
Defra, Electra Way
Crewe
Cheshire
CW1 6GJ
Tel: 01270 754000

Areas covered:
Cheshire, Cleveland, Cumbria, Derbyshire, Durham, Greater Manchester, Humberside, Lancashire, Leicestershire, Lincolnshire, Merseyside, Northamptonshire, Northumbria, North Yorkshire, Nottinghamshire, South Yorkshire, Tyne and Wear, West Yorkshire

Environment Agency
Cambria House
29 Newport Road
Cardiff
CF24 0TP
Tel: 08708 506506
Website: http://www.environment-agency.gov.uk

Health & Safety Executive (HSE)
Government Buildings
Phase 1
Ty Glas
Cardiff
CF14 5SH
HSE Infoline Tel: 0845 345 0055
Website: http://www.hse.gov.uk

Transport Directorate
Welsh Assembly Government
Roads Network Management Division
Cathays Park
Cardiff
CF10 3NQ
Tel: 029 2082 6297
Website: http://www.wales.gov.uk/subitransport/index.htm

Network Rail
40 Melton Street
London
NW1 2EE
Tel: 08457 11 41 41
Website: http://www.networkrail.co.uk/

Pesticide Safety Directorate (PSD)
Mallard House
Kings Pool
3 Peasholme Green
York
Y01 7PX
Tel: 01904 455775
Website: http://www.pesticides.gov.uk

APPENDIX III

USEFUL PUBLICATIONS

Defra Publications

- The Weeds Act 1959 Preventing the spread of harmful weeds (PB7189)

- The Weeds Act 1959 Guidance on the methods that can be used to control harmful weeds (PB7190)

- Weed Identification (PB4192)
  Provides guidance on weed identification including ragwort species

- The Code of Practice for Using Plant Protection Products
  A code of practice providing guidance on the safe use of pesticides on farms and holdings, amenities, horticulture and forestry

- The Air Code (PB0618)
  Provides guidance on avoiding air pollution from odours, ammonia and smoke

- The Water Code (PB0587)
  Provides guidance on pesticide storage, use and disposal

- The Soil Code (PB0617)
  Provides guidance on the protection of soil and prevention of erosion

- Arable Area Payments Scheme Explanatory Guide: Part II 2002 Edition (AR 35B)
  Guidance on weed control on set-aside land

Copies of all numbered Defra publications can be obtained from:

Plant Health and Biotechnology Branch
Food and Market Development Division
Welsh Assembly Government
Cathays Park
Cardiff
CF10 3NQ

Tel: 029 2082 5773
Fax: 029 2082 5121
Email: planthealthandbiotech@wales.gsi.gov.uk

And are also available on the Defra website (www.defra.gov.uk)

Other Publications

- The Safe Use of Pesticides for Non-agricultural Purposes (HSC 1995)
  An approved code of practice giving practical guidance on the use of non-agricultural pesticides in accordance with the requirements of the COSHH Regulation 1994

- The UK Pesticide Guide (CAB International & BCPC) (ISBN 0-85199-6892)
  Annual publication of available pesticides and adjuvants in the UK for use in agriculture, horticulture, forestry and amenity situations

- Common Ragwort (Senecio jacobaea) – towards a Ragwort management strategy
  English Nature Information Note (English Nature 2003)
  Information note on the control of common ragwort

- "A Guide to Animal Welfare in Nature Conservation Grazing" (Grazing Animal Project 2001). Available from GAP Office, The Kiln, Mather Road, Neward, Nottinghamshire. NG24 1WT. Tel: 01636 670095. Fax 01636 670001 E-mail gap@cix.couk.
  Provides guidance on the management of stock on nature conservation sites.

- "Guidance for Safer Temporary Traffic Management", published by the Transport Research Laboratory ISBN 0 9521860 98 (www.trl.co.uk).

APPENDIX IV

SOURCES OF TECHNICAL ADVICE ON RAGWORT CONTROL

ADAS

ADAS Cardiff
Henstaffe Court Business Centre
Groesfaen
Cardiff
CF72 8NG
Tel. 029 2089 9100
Fax. 029 2089 0054

ADAS Ruthin
Eden Court
Lon Parcwr Business Park
Ruthin
Denbighshire
LL15 1NJ
Tel. 01824 704060
Fax. 01824 707163
Website: http://www.adas.co.uk

AGRICULTURAL INDUSTRIES CONFEDERATION (AIC)

Member companies supply and distribute agrochemicals
Confederation House
East of England Showground
Peterborough
PE2 6XE
Tel: 01733 385230
Fax: 01733 385270
Email: enquiries@agindustries.org.uk
Website: http://www.agindustries.org.uk

AICC (Association of Independent Crop Consultants)

Provide chargeable consultancy advice
Agriculture House
Station Road
Liss
Hampshire
GU33 7AR
Tel: 01730 895354
Fax: 01730 895535
Website: http://www.aicc.org.uk

ALVAN BLANCH
Supplier of the 'Eco-Puller' mechanical ragwort lifter
Chelworth
Malmesbury
Wiltshire
SN16 9SG
Tel: 01666 577333
Fax: 01666 577339
Website: http://www.alvanblanch.co.uk

AQUATIC WEEDS RESEARCH UNIT
Control of injurious weeds in or near water
The Centre for Aquatic Plant Management
CEH Wallingford
Maclean Building
Benson Lane
Crowmarsh Gifford
Wallingford
Oxfordshire
OX10 8BB
Tel: 01491 838800
Fax: 01491 692424
Website: http://www.capm.org.uk

BCPC (formerly British Crop Protection Council)
Member companies can supply technical literature
7 Omni Business Centre
Omega Park
Alton
Hampshire
GU34 2DQ
Tel: 01420 593200
Fax: 01420 593209
Website: http://www.bcpc.org

BARRIER ANIMAL HEALTHCARE
Supplier of Citronella Oil derived product
36 Haverscroft Industrial Estate
New Road
Attleborough
Norfolk
NR17 1YE
Tel: 01953 456363
Fax: 01953 455594
Website: http://www.barrier-biotech.com

BASIS Registration Ltd
Runs the accreditation scheme for advisors of pesticide use
BASIS
34 St John Street
Ashbourne
Derbyshire
DE6 1GH
Tel: 01335 343945
Fax: 01335 346488
Website: http://www.basis-reg.co.uk

BRITISH HORSE SOCIETY (THE)
National organisation for horse owners and riders
Stoneleigh Deer Park
Kenilworth
Warwickshire
CV8 2XZ
Tel: 08701 202244
Fax: 01926 707800
Website: http://www.bhs.org.uk

BRITISH GOAT SOCIETY
34-36 Fore Street
Bovey Tracey
Near Newton Abbot
Devon
TQ13 9AD
Tel: 01626 833168
Fax: 01626 834536
Website: http://www.allgoats.com
Email: secretary@allgoats.com

BRITISH INSTITUTE OF AGRICULTURAL CONSULTANTS (BIAC)
Provide chargeable consultancy advice
The Estate Office
Torry Hill, Milstead
Sittingbourne, Kent
ME9 0SP
Tel: 01795 830100
Website: http://www.biac.co.uk

COUNTRYSIDE COUNCIL FOR WALES
Maes-y-ffynnon
Penrhosgarnedd
Bangor, Gwynedd
LL57 2DW
Tel: 0845 1306229
Website: http://www.ccw.gov.uk/index.cfm

FARMING AND WILDLIFE ADVISORY GROUP (FWAG)
Advice on farming and conservation
FWAG Cymru
Ffordd Arran
Dolgellau
Gwynedd
LL40 1LW
Tel: 01341 421456
Fax: 01341 422757
Email: cymru@fwag.org.uk
Website: http://www.fwag.org.uk

THE HENRY DOUBLEDAY RESEARCH ASSOCIATION
Organic gardening, including weed control
Garden Organic
Ryton Organic GardensRyton
Coventry
CV8 3LG
Tel: 024 7630 3517
Fax: 024 7663 9229
Email: enquiry@hdra.org.uk
Website: http://www.hdra.org.uk

INSTITUTE OF GRASSLAND AND ENVIRONMENTAL RESEARCH (IGER)
Plas Gogerddan
Aberystwyth
Ceredigion
SY23 3EB
Tel: 01970 823000
Fax: 01970 828357
Email: iger.reception@bbsrc.ac.uk
Website: http://www.iger.bbsrc.ac.uk/default.asp

LAZY DOG TOOL LTD
Supplier of ragwort lifting tools & weeding brigades
Hill Top Farm
Spaunton
Appleton-Le-Moors
North Yorkshire
YO62 6TR
Tel/Fax: 01751 417 351
Email: enquiries@lazydogtoolco.co.uk
Website: http://www.lazydogtoolco.co.uk

MACHINERY RING ASSOCIATION OF ENGLAND & WALES
Co-operative supply of machinery & labour
RAMSAK
Windmill Farm
Rolvenden
Tenterden
Kent
TN17 4PF
Tel: 01580 241349
Fax: 01580 243425
Email: angus@ramsak.co.uk
Website: http://www.machineryrings.org.uk

NATIONAL ASSOCIATION OF AGRICULTURAL CONTRACTORS
Member companies can provide contracting services in agriculture amenity and industrial land based areas
Samuelson House
Paxton Road
Orton Centre
Peterborough
PE2 5LT
Tel: 01733 362920
Fax: 01733 362921
Email: members@naac.co.uk
Website: http://www.naac.co.uk

NATIONAL BEEF ASSOCIATION
Mart Centre
Tyne Green
Hexham
NE46 3SG
Tel: 01434 601005
Fax: 01434 601008
Email: info@natbeef.demon.co.uk
Website: http://www.nationalbeefassociation.co.uk/

NATIONAL SHEEP ASSOCIATION
The Sheep centre
Malvern
Worcestershire
WR13 6PH
Tel: 01684 892 661
Fax 01684 892 663
Email: enquiries@nationalsheep.org.uk
Website: http://www.nationalsheep.org.uk/

ORGANIC CENTRE WALES
Institute of Rural Studies
University of Wales
Aberystwyth
Ceredigion
SY23 3AL
Tel: 01970 622248
Fax: 01970 622238
Email: organic@aber.ac.uk
Technical helpline 01970 622100
Website: http://www.organic.aber.ac.uk/

RAG-FORK
Suppliers of ragwort lifting tool
110 Sunderland Street
Tickhill
Doncaster
DN11 9ER
Tel: 01302 746077
Fax: 01302 750345
Email: sales@rag-fork.co.uk
Website: http://www.rag-fork.co.uk

RAGWORT-UK LTD
Cinnabar biological control agents
Ragwort-UK Ltd
74 Roman Bank
Long Sutton
Lincolnshire
PE12 9LB
Tel: 01406 365180
Fax: 01406 365446
Email: forum@ragwort-uk.com
Website: http://www.ragwort-uk.com

SCOTTISH AGRICULTURAL COLLEGE
Provide chargeable consultancy advice
Corporate Information Office
King's Buildings
West Mains Road
Edinburgh
EH9 3JG
Tel: 0131 535 4000
Email: information@sac.co.uk
Website: http://www.sac.ac.uk/

The presence of any organisation on this list does not infer that the Code endorses the advice, guidance, information, products or services of any organisation listed.