

Guidance on environmental risk mitigation / precaution labelling for UK approved plant protection products, including 'safety precautions' required under Commission Regulation (EU) No 547/2011 and UK specific labelling.

This paper aims to give some guidance as to how the various types of environmental risk labelling are used on Plant Protection Products (PPPs) in the UK.

Risk labelling is used to identify where risk management or mitigation measures / restrictions should be employed to minimise particular risks occurring through the intended use of a product. The principles of risk labelling are described below, both with regards to EU regulation ((EU) No.547/2011), and any retained UK risk phrases which were developed previously under COPR (1986). Note well that any retained UK COPR risk phrasing is applicable IN ADDITION to the agreed Commission regulation labelling. For some commission regulation phrases there is no agreed UK parallel, and explanation of such cases is provided in the following tables (1 to 8).

Guidance for Hazard classification and labelling requirements are not considered in detail in this document, sources of additional information are indicated where appropriate.

The difference between Hazard and Risk labelling:

Hazard classification and labelling is also required for products authorised in the UK. Hazard classifications are based on the intrinsic toxicity or other properties of a substance or preparation, whereas a true determination of risk also takes into account the likelihood of that hazard occurring (e.g. in relation to exposure through normal use). Hazard labelling is normally used to identify harm that might occur through, e.g. accidental spills, washing of equipment, disposal of a product or its container. Previously this was conducted following the Chemicals (Hazard Information and Packaging for Supply) regulations (AKA 'CHIP 4'). However, current Environmental Classification and Labelling is required to follow the 'CLP regulation' (Reg. (EC) 1272/2008). The only wildlife group for which a hazard classification is currently undertaken under CLP regulation is aquatic life. Further CRD guidance for both [CHIP4](#) and [CLP](#) labelling with regards to the environment is available on CRD's website.

For all other wildlife groups, e.g. birds, bees, non-target arthropods, CRD, as well as current Commission regulation has implemented an entirely risk-based approach to labelling.

Environmental 'safety precautions' (risk labelling) required under Commission Regulation (EU) No 547/2011

The labelling requirements, under Regulation (EU) No 547/2011, are equivalent to those previously required under Annex V to Directive 91/414 and apply to all UK plant protection products with a post-Annex I approval (or its equivalent authorisation under PPP Reg. (EC) No 1107/2009). All products authorised under Reg. (EC) No 1107/2009 that require labelling to ensure safe use, based on an assessment according to uniform principals, should apply the labelling phrases included in Tables 1 to 8.

Where 'safety precautions' phrases are included as 'Environmental Protection Restrictions' in the Notice of Approval, they should be included or flagged as such on the approved label in any 'Statutory Box'. Although there is a requirement for users to observe any such precautions or directions wherever they occur on product labels, some environmental phrases have previously been considered to be advisory in nature. Pending further discussions on risk management, some previously used 'COPR' advisory risk phrases will be continue to be employed - since they are considered to provide useful information to users when selecting and applying products.

Specific details in relation to possible risk mitigation / precautionary labelling to protect non-target terrestrial vertebrates, aquatic life, ground water, bees and other pollinators, terrestrial arthropods, soil organisms, and terrestrial plants are detailed in turn in Tables 1 to 8. Consideration of how the EU 'safety precautions' relate to UK labelling phrases is also included.

Contents

Table 1: Risk mitigation phrases to protect terrestrial vertebrates: granules, pellets and baits	4
Table 2: Risk mitigation phrases to protect terrestrial vertebrates: seed treatments	6
Table 3: Risk mitigation phrases to protect aquatic organisms.....	8
Table 4: Risk mitigation phrases for protection of groundwater	12
Table 5: Risk mitigation phrases to protect bees and other pollinating insects	13
Table 6: Risk mitigation phrases to protect other non-target terrestrial (crop dwelling) arthropods	15
Additional information on labelling and risk management strategies for non-target arthropods in the UK:	17
Table 7: Risk mitigation phrases to protect soil organisms and soil functions.	19
Table 8: Risk mitigation phrases to protect non-target terrestrial plants	20
Appendix I:	21

UK environmental labelling implemented under Regulation (EU) No 547/2011

Table 1: Risk mitigation phrases to protect terrestrial vertebrates: granules, pellets and baits

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant 'safety precaution' under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU 'safety precaution' phrase	CRD's Comments
SPe 5: To protect <i>[birds / wild mammals]</i> the product must be entirely incorporated in the soil; ensure that the product is fully incorporated at the end of rows.	SPe 5: To protect <i>[birds / wild mammals]</i> the product must be entirely incorporated in the soil; ensure that the product is fully incorporated at the end of rows.	The phrase shall be assigned to plant protection products such as granules or pellets which must be incorporated to protect birds or mammals from harm.	Various UK phrases have been devised in order to manage risks from solid formulations by ensuring that they are not accessible to birds or mammals. All have a similar meaning to the example quoted here. The current SPe 5 phrase states clearly what is required and will be used where a risk assessment indicates that incorporation is required to manage a risk to birds or mammals from consumption of the plant protection product. SPe 5 phrase would not be applied to products such as slug pellets which are intended to be left on the surface.
SPe 6: To protect <i>[birds / wild mammals]</i> remove spillages.	SPe 6: To protect <i>[birds / wild mammals]</i> remove spillages.	The phrase shall be assigned to plant protection products such as granules or pellets to avoid uptake by birds or wild mammals. Recommended for all solid formulations used undiluted.	The SPe 6 criteria indicate that it is to be used for all solid formulations which are used undiluted. SPe 6 phrase is relevant for products such as slug pellets which may be left on the surface, as well as granules and pellets intended for incorporation.
SPe 5 and SPe 6: To protect <i>[birds / wild mammals]</i> the product must be entirely incorporated in the soil; ensure that the product is fully incorporated at the end of rows. Remove spillages.	SPe 5 and SPe 6: To protect <i>[birds / wild mammals]</i> the product must be entirely incorporated in the soil; ensure that the product is fully incorporated at the end of rows. Remove spillages.	-	Where both SPe 5 and SPe 6 are required as a result of a risk assessment, they will be combined (as shown) on labels for solid formulations which are incorporated into soil.

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU ‘safety precaution’ phrase	CRD’s Comments
Not applicable, see comments	SPe 7: Do not apply during bird breeding period.	The phrase shall be assigned when an evaluation according to the Uniform Principals shows that for one or more of the labelled uses such a mitigation measure is necessary.	It is not foreseen that the SPe 7 phrase will be used in the UK. If a risk assessment indicates that birds are likely to be at risk during the breeding season, and the risk cannot be managed in some other way, then usually no authorisation is recommended. Use during the breeding season may be difficult to determine and hence enforce. A restriction on time of use to cover all eventualities is more easily enforced and less open to misinterpretation.

Table 2: Risk mitigation phrases to protect terrestrial vertebrates: seed treatments

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>There are no EU ‘safety precaution’ phrases for seed treatments. Labelling required by CRD for seed treatments and treated seed sack labels will continue to be used in the UK where a risk has been identified which requires mitigation. Current UK wording is included below:</p>			
<p>To protect <i>[birds / wild mammals]</i>, treated seed should not be left on the soil surface. Bury or remove spillages.</p> <p>Treated seed should not be broadcast.</p>	<p>No equivalent EU ‘safety precaution’ phrase</p>	<p>-</p>	<p>Where an assessment indicates that without risk mitigation measures consumption of treated seed may pose a risk to birds or mammals, the UK phrase will be used on seed sack labels provided that such management practices are considered to adequately minimise the risk. In some cases the amount of seed left in a spill may pose a risk whilst the small amount available from seed accidentally unincorporated might not. However, both ‘... not be left on soil surface...’ and ‘Bury...’ are usually used.</p> <p>The UK wording has been altered to bring it into line with that used in other EU ‘safety precaution’ phrases (i.e. ‘To protect...’). As with other solid formulations (see SPe 6 above), removing spillages of treated seed may be more appropriate than burying them. Therefore the two phrases have been combined.</p>
<p>Seed should be drilled to a depth of 40 mm into a well-prepared seed bed.</p> <p>If seed is present on the soil surface, or if spills have occurred, then, if conditions are appropriate, the field should be harrowed and then rolled to ensure good incorporation.</p>	<p>No equivalent EU ‘safety precaution’ phrase</p>	<p>-</p>	<p>This phrase only applies to cereal seeds and where mitigation is required to reduce the availability of treated seed. The UK phrase should be used if the risk management method(s) are sufficient to reduce risk to an acceptable level. Other factors may need consideration, for example drilling depth may have efficacy implications (supporting data demonstrating efficacy with 40 mm incorporation would be required as part of the efficacy data package).</p>

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant 'safety precaution' under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU 'safety precaution' phrase	CRD's Comments
Aerial application – None applicable, see comments	No equivalent EU 'safety precaution' phrase	-	<p>Aerial seed application is inefficient and rarely used in the UK and it is not envisaged that a UK label phrase will be needed in future.</p> <p>The previous phrase was: DO NOT APPLY TREATED SEED FROM THE AIR.</p> <p>It may be removed from existing sack labels in subsequent re-prints, unless applicants or CRD are aware that aerial application may still occur under certain circumstances.</p>

Table 3: Risk mitigation phrases to protect aquatic organisms

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant 'safety precaution' under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU 'safety precaution' phrase	CRD's Comments
<p>All plant protection products should now be labelled regarding their aquatic hazard classification in line with that required in the UK under 'CLP Regulation' (Reg. (EC) No 1272/2008 with amendments under Reg. (EU) No 286/2011). As of 01 June 2015 classification according to CLP will be required for all product applications. Note; labelling under 'CHIP4' (2009) legislation is no longer required (UK implementation of the Dangerous Substances Directive 67/548/EEC). (Further details of aquatic hazard classification under CLP are available at http://www.hse.gov.uk/pesticides/resources/e/clp-hazard-classification-and-labelling-guidance-note-september-2014.pdf)</p>			
<p>Professional use</p> <p>Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.</p> <p>Amateur use [†]</p> <p>Do not contaminate water with the product or its container.</p> <p>Do not empty into drains</p>	<p>SP 1:</p> <p>Do not contaminate water with the product or its container [<i>Do not clean application equipment near surface water / Avoid contamination via drains from farmyards and roads</i>].</p>	<p>All plant protection products should be labelled with 'Do not ...or its container.' The text in parenthesis should be used as appropriate (see Comments)</p>	<p>In line with previous requirements, all product labels should carry the SP 1 phrase. The words 'except as directed for aquatic use' may be added when use of the product in-or-near water is authorised.</p> <p>The operations indicated in italics in SP 1 are standard good practice for all spray operators in the UK. Operators are legally required to be trained to handle, apply and dispose of plant protection products appropriately and this includes taking action to avoid contamination of water. These parts of SP 1 should however, be included unless they are inappropriate for a particular product's use situation. Where use is horticultural rather than agricultural, substitution of 'farmyards' by other terms, e.g. simply 'yards', is considered appropriate.</p> <p>For all amateur use plant protection products, the amateur use phrase should be applied ([†]), with the additional phrase 'Do not empty into drains'.</p>

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>Not applicable – see comments</p>	<p>SPE 2: To protect <i>[groundwater / aquatic organisms]</i> do not apply to <i>(soil type or situation to be specified)</i> soils.</p>	<p>The phrase may be assigned as a risk mitigation measure to avoid any potential contamination of groundwater or surface water under vulnerable conditions (for example associated to soil type, topography or for drained soils), if an evaluation according to the Uniform Principles show for one or more of the labelled uses that risk mitigation measures are necessary to avoid unacceptable effects.</p>	<p>Due to practical issues of interpretation and enforceability, it is not anticipated that this phrase will be widely used in the UK. If an applicant wishes to use such a phrase, they would need to show that the ‘Uniform Principles’ were complied with. They would need to provide a clear description of the relevant conditions under which application was made and a strong justification that the risk was acceptable and manageable. Applicants are advised to consult CRD at an early stage in preparing their application and, as this is a relatively novel area of risk management, the Expert Committee on Pesticides (formerly the Advisory Committee on Pesticides) may need to be consulted.</p>

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements.</p>	<p>SPe 3: To protect [aquatic organisms / non-target plants / non-target arthropods / insects] respect an unsprayed buffer zone of (distance to be specified) to [non-agricultural land / surface water bodies].</p> <p>No equivalent EU SP phrase</p>	<p>The phrase shall be assigned to protect aquatic organisms if an evaluation according to the Uniform Principles shows for one or more of the labelled uses that risk mitigation measures are necessary to avoid unacceptable effects.</p>	<p>Until further notice, the UK will continue to use existing LERAP phrases in addition to SPe 3 where a risk to aquatic life from spray use has been identified. The SPe 3 phrase has been modified slightly to read as follows:</p> <p>‘To protect aquatic organisms, respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements’.</p> <p>The appropriate existing LERAP phraseology would then follow this phrase.</p> <p>The associated LERAP phrases based on the application method and buffer distance can be found in the Labelling Handbook Volume 2.</p> <p>Further advice related to LERAP is available and see also Active substance PECsw calculations (for UK specific authorisation requests).</p> <p>Although aerial application is now uncommon in the UK, risk management may occasionally still be required. Products must undergo a specific risk assessment and be authorised for application from the air. Where appropriate the SPe 3 phrase should be modified slightly to read as follows: ‘To protect aquatic organisms, respect an unsprayed horizontal buffer zone distance to surface water bodies of X m when spraying from aircraft’ (where X is usually 250 m).</p> <p>Amateur uses: For UK amateur use products. Exposure is assumed to be managed through appropriate labelling. Most spray home garden products should have the following phrase:</p> <p>‘Direct spray away from ponds and other surface water bodies’</p>

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU ‘safety precaution’ phrase	CRD’s Comments
<p>For products recommending use in or near water</p> <p>a)</p> <p>The maximum concentration of active ingredient in treated water must not exceed X ppm or such lower concentration as the appropriate water regulatory authority may require.</p> <p>b)</p> <p>Users must consult the appropriate water regulatory body (Environment Agency/ Scottish Environment Protection Agency) before using the product near water and must obtain their agreement before using this product to control aquatic weeds.</p>	<p>No equivalent EU ‘safety precaution’ phrase</p>	<p>-</p>	<p>The two existing UK phrases regarding the maximum water concentration and consultation of appropriate authorities will still be used as appropriate on all products recommended for use in or near water (a and b in the ‘Current UK phrase’ column).</p> <p>X ppm is the concentration at which it is determined through a suitable risk assessment, no unacceptable effects on aquatic organisms other than the target organism will occur.</p>
<p>Not applicable, see comments</p>	<p>SPe 4:</p> <p>To protect [aquatic organisms / non-target plants] do not apply on impermeable surfaces such as asphalt, concrete, cobblestones, [railway tracks] and other situations with a high risk of run-off.</p>	<p>Depending on the use pattern of the plant protection product, Member States may assign the phrase to mitigate the risk of run-off in order to protect aquatic organisms.</p>	<p>‘Impermeable surfaces’ equates to ‘hard surfaces’ within the definition ‘plant free area’ in CRD’s current UK ‘Crop Definitions List’ (previously ‘Crop Hierarchy’). A specific authorisation is required for hard surface use. Therefore, there would be no need for the SPe 4 phrase and we do not foresee its use in the UK.</p> <p>The risk from run-off in ‘other situations’ would be considered as part of a pre-registration risk assessment. If a particular risk was identified, either the GAP would be modified (where possible) or no authorisation would be given, rather than employing SPe 4.</p>

Table 4: Risk mitigation phrases for protection of groundwater

<p>Current UK phrase (In bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>See comments</p>	<p>SPe 1: To protect <i>[groundwater / soil organisms]</i> do not apply this or any other product containing <i>(identify active substance or class of substance, as appropriate)</i> more than <i>(time period or frequency to be specified).</i></p>	<p>The phrase shall be assigned to plant protection products for which an evaluation according to the Uniform Principles shows that for one or more of the labelled uses, that risk mitigation measures are necessary to avoid contamination of groundwater</p>	<p>If the GAP for a product cannot be adjusted sufficiently, the SPe 1 phrase might be used to minimise exposure of groundwater. That is unless crop rotation patterns in the UK, combined with recommendations for use of the product (and active substance) would mean that, in practice, the re-use interval would be longer than identified in the regulatory assessment as being ‘necessary’ to cause pollution of groundwater. Any case to support this would need to be corroborated by relevant information on use and cropping patterns.</p> <p>Since authorisations are given on a product by product rather than active substance basis, enforcement of the ‘...or any other product...’ part of the phrase might also prove unrealistic, in which case use of the SPe 1 phrase may not be considered appropriate.</p>

Table 5: Risk mitigation phrases to protect bees and other pollinating insects

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant 'safety precaution' under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU 'safety precaution' phrase	CRD's Comments
<p>When required for all crops</p> <p>SPe 8:</p> <p>Dangerous to bees. To protect bees and pollinating insects do not apply to crop plants when in flower. Do not use where bees are actively foraging. Do not apply when flowering weeds are present.</p> <p>When only required for some crops [†]</p> <p>SPe 8:</p> <p>Dangerous to bees. To protect bees and pollinating insects do not apply to crop plants when in flower, except as directed on [crop]. Do not use where bees are actively foraging. Do not apply when flowering weeds are present.</p>	<p>SPe 8:</p> <p>Dangerous to bees. To protect bees and pollinating insects do not apply to crop plants when in flower./ Do not use where bees are actively foraging./ Remove or cover beehives during application and for (<i>state time</i>) after treatment./ Do not apply when flowering weeds are present./ Remove weeds before flowering/ Do not apply before (<i>state time</i>).</p>	<p>The phrase shall be assigned to plant protection products when an evaluation according to the Uniform Principles shows, for one or more of the labelled uses, that risk mitigation measures must be applied to protect bees or other pollinating insects. Depending on the use pattern of the plant protection product and other relevant National regulatory provisions, Member States may select the appropriate phrasing to mitigate the risk to bees and other pollinating insects and their brood.</p>	<p>The SPe 8 phrase includes reference to 'pollinating insects'. Currently there are no agreed guidelines on how to assess the risk to insect pollinators other than bees. However, unless specific cases are highlighted which require a novel assessment the standard bee risk assessment is currently considered to cover other pollinators. Risk management to protect bees, e.g. not applying to flowering crops or when flowering weeds are present, should also reduce any risk posed to other pollinators.</p> <p>The UK wording '...except as directed on [crop]' may be added to the new SPe 8 phrase following '...crop plants when in flower,' where use is on several crops - but where only some of these uses pose a risk to bees ([†]).</p> <p>As regards the statement to 'Remove or cover beehives during application and for [<i>state time</i>] after treatment', in the EU SPe 8 phrase, there is no equivalent element in the existing UK labelling. Removing or covering hives is not considered common practice in the UK. Following consultation with national beekeeping organisations, it has been decided that this part of the SPe 8 phrase will not be used in the UK. It is considered that the provisions of the 'Code of Practice for the Safe Use of Pesticides on Farms and Holdings' and an efficiently run liaison scheme are sufficient.</p> <p>The intention and value of the phrase 'Remove weeds before flowering' is unclear and therefore this part of the phrase will not be used in the UK.</p> <p>In the phrase: 'Do not apply before (<i>state time</i>)', it is unclear whether 'time' implies time of day, time of year or time in relation to crop development. Time of year and crop development is taken into account during the risk assessment when considering the timing of applications and resulting risk to bees. Regarding time of day, advice is given in the Code of Practice for using Plant Protection Products to spray in the evening after the bees have stopped foraging, or in the early morning. Therefore, the need for this phrase is addressed in other ways and it will not be used.</p>

Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU ‘safety precaution’ phrase	CRD’s Comments
Amateur use SPe 8: Dangerous to bees. To protect bees and pollinating insects do not apply to plants when in flower. Do not use where bees are actively foraging. Do not apply when flowering weeds are present.	SPe 8: Dangerous to bees. To protect bees and pollinating insects do not apply to crop plants when in flower./ Do not use where bees are actively foraging./ Remove or cover beehives during application and for (<i>state time</i>) after treatment./ Do not apply when flowering weeds are present./ Remove weeds before flowering/ Do not apply before (<i>state time</i>).		Amateur uses: For amateur use products the SPe 8 phrase as included in the ‘Current UK phrase’ column may be required to mitigate the risk to foraging bees. This will be required where assessment to uniform principals indicates mitigation is required to protect foraging bees/pollinating insects.

Table 6: Risk mitigation phrases to protect other non-target terrestrial (crop dwelling) arthropods

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>SPe 3:</p> <p>To protect non-target insects/arthropods respect an untreated buffer zone of 5m to non-crop land.</p>	<p>SPe 3:</p> <p>To protect <i>[aquatic organisms / non-target plants / non-target arthropods / insects]</i> respect an unsprayed buffer zone of <i>(distance to be specified)</i> to <i>[non-agricultural land / surface water bodies]</i>.</p>	<p>The phrase shall be assigned to protect non-target arthropods, if an evaluation according to the Uniform Principles shows that, for one or more of the labelled uses, that risk mitigation measures are necessary to avoid unacceptable effects.</p>	<p>Statutory label phrase:</p> <p>This refers to the statutory phrase required when a risk assessment, conducted according to Uniform Principles, indicates a buffer zone is required to protect in-field or off-field non-target arthropods (assessed according to ESCORT 2 guidance). A maximum buffer distance of 5 m is considered for protection of non-target arthropods in the UK, for boom sprayer applications on arable crops.</p> <p>See the additional text regarding labelling and risk management for non-target arthropods for more details. A full decision tree for assessing the possible risk assessment outcomes that may require mitigation is included in Appendix I.</p> <p>Use of a plant protection product, requiring mitigation, during April to August in a major cereal crop would normally require statutory labelling due to the scale of use. Similarly plant protection products with broad spectrum toxicity to non-target arthropods would normally also require statutory labelling when mitigation is required.</p> <p>Risk mitigation labelling for plant protection products with narrow range toxicity to non-target arthropods may be advisory. As would labelling for short-term in-field impacts without off-field effects.</p> <p>The statutory labelling is only expected to apply to tractor mounted boom sprayer applicators. For application via air-assisted applicators advisory labelling would normally be applied see the relevant phrase detailed below.</p>

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>Field crops application using tractor-mounted boom sprayers and applicators – ADVISORY PHRASE</p> <p>a) should appear in the ‘Precautions’ section of the product label</p> <p>RISK TO NON-TARGET INSECTS OR OTHER ARTHROPODS. See Directions for use.</p> <p>b) should appear in the ‘Directions for use’ section of the product label</p> <p>Avoid <i>spraying/application</i>* within 5 m of the field boundary to reduce effects on non-target insects or other arthropods</p> <p>*The term ‘application’ is intended for use with solid products.</p>	<p>No equivalent EU ‘safety precaution’ phrase</p>	<p>-</p>	<p>Advisory label phrase for applications using tractor-mounted boom sprayers and applicators.</p> <p>Amateur uses: For amateur use products The Environmental Panel (of the Expert Committee on Pesticides; formerly the Advisory Committee on Pesticides) concluded that no risk assessment was required for non-target arthropods in the home garden. However, labelling may be required for highly toxic insecticides for specific product types. In such cases only part a) of the advisory label phrase should be applied:</p> <p>‘Risk to non-target insects or other arthropods’</p>
<p>Broadcast air-assisted spray application - ADVISORY PHRASE</p> <p>a) should appear in the ‘Precautions’ section of the product label</p> <p>RISK TO NON-TARGET INSECTS OR OTHER ARTHROPODS. See Directions for use.</p> <p>b) should appear in the ‘Directions for use’ section of the product label</p> <p>The best available application technique, which minimises off-target drift should be used to reduce effects on non-target insects or other arthropods.</p>	<p>No equivalent EU ‘safety precaution’ phrase</p>	<p>-</p>	<p>Advisory label phrase for broadcast air-assisted spray application (for example to orchards, hops, vines and other soft fruits).</p> <p>Buffer zones are not expected to be practical restrictions for broadcast air-assisted uses. The labelling phrases included in the column ‘current UK phrase’ are normally expected to be used where mitigation is required to protect non-target arthropods. The two sections of text should be included in the ‘Precautions’ and ‘Directions for use’ sections of the product label respectively.</p>

Additional information on labelling and risk management strategies for non-target arthropods in the UK:

1. INTRODUCTION

In November 2002 CRD published the view of the Environmental Panel of the Advisory Committee on Pesticides on risk assessment for non-target arthropods. More specifically, the publication communicated the Panel's opinion on ESCORT 2 and how the approach could be incorporated into the regulatory risk assessment for non-target arthropods in the UK.

It was recognised that evaluating separately the in- and off-field risks posed to non-target arthropods would require a revision of the previously used labelling and risk management strategies. The subsequent implementation of environmental risk mitigation phrases included in Annex V of Directive 91/414/EEC and in the replacing EU Regulation Reg. (EU) No 547/2011 also necessitated a revision of Previous UK labelling.

2. REVISION OF LABELLING AND RISK MANAGEMENT STRATEGIES FOR TRACTOR-MOUNTED BOOM SPRAYERS AND APPLICATORS

In consultation with the Environmental Panel, CRD prepared a revised decision-making flow chart for the labelling and risk management of plant protection products (PPPs) with respect to non-target arthropods (Appendix I). The type of labelling used will be considered on a case by case basis, taking into account the level of risk posed and other factors such as the crop, application type/timing and agronomic implications. Information on currently agreed labelling phrases is provided in above table 6. The presented revised flow chart in Appendix I has been prepared in line with the step-wise decision making criteria of ESCORT 2 and is laid out to reflect that the risk assessment under ESCORT 2 requires consideration of both in- and off-field effects. The scheme is intended to fulfil two roles: the first is one that is consistent with the aims of ESCORT 2, namely to mitigate any direct effects of a pesticide through, for example, the use of an appropriate buffer zone. The second is to meet the concerns of the Environmental Panel with respect to wider ecological issues.

It is hoped that the flow diagram is self-explanatory. Applicants should follow the left-hand side when conducting the in-field assessment and the right-hand side when conducting the off-field assessment. The 'centres' of the diagram are decisions that are common to both the in- and off-field risk assessments

3. REGULATORY USE OF HIGHER TIER DATA

ESCORT 2 permits the submission of higher tier (for example recovery) data to refine both in- and off-field risk assessments. As a result, such data can be used to remove the need for statutory labelling in relation to both in- and off-field risk. However, depending on factors such as the magnitude, duration and spectrum of effects and how and when the pesticide is applied, the submission of such data may still result in advisory labelling being proposed to indicate that there is a significant short-term risk (in- and/or off-field) to non-target arthropods.

This is due, in part, to the fact that many species of farmland bird, including those whose national conservation status is causing concern, forage in arable crops, gathering invertebrates to feed their young. Along with other factors, the inability of modern sprayed crops to provide sufficient invertebrates has been shown to have contributed to the decline of some species, for example corn bunting and grey partridge. Spraying certain pesticides during ecologically relevant time periods could therefore be a contributory factor in the decline of these birds as well as the arthropods themselves. With this in mind therefore, if the in-field assessment identifies a short-term risk based on the proposed use of the product, for example summer application to cereals,

but there is the 'potential' for re-colonisation/recovery within the cropping season, then advisory labelling may still be imposed. To remove any advisory labelling higher-tier data would be required.

4. ACCEPTABLE 'BUFFER ZONE' DISTANCES

The Environmental Panel agreed to a maximum unsprayed field margin or buffer zone distance of 5 metres for applications from horizontal boom sprayers. This is a slight reduction from the earlier required 6 metres, but is consistent with the tabulated drift values from ESCORT 2 and buffer zones for the aquatic environment. Where a buffer zone is proposed it should be clearly demonstrated that it is effective in mitigating any potential risk to non-target arthropods in both the off- and in-field area. In circumstances where the decision making scheme does not identify an acceptable risk to non-target arthropods further consideration should be given to risk management options apart from buffer zones, e.g. modifying the application rate, application frequency and intervals or timing of applications.

5. IMPLEMENTATION

The indicated relevant labelling applies to all pesticide products authorised in the UK under the past 'Plant Protection Product Regulations 2003', or under the current 'EU Regulation 1107/2009', that are used in the arable environment and applied via tractor mounted horizontal boom sprayers. For broadcast air-assisted spray applications, such as those made in orchards, top fruit, hops, grapes and some soft fruits, it is recognised that a buffer zone to protect non-target arthropods is not a practical restriction and that Integrated Pest Management (IPM) is more active in such use situations. In such use situations, in order to reduce any potential impact of pesticides on non-target arthropods occupying field margin areas, the relevant advisory risk phrase should appear in the 'Precautions' section of the product label.

Table 7: Risk mitigation phrases to protect soil organisms and soil functions

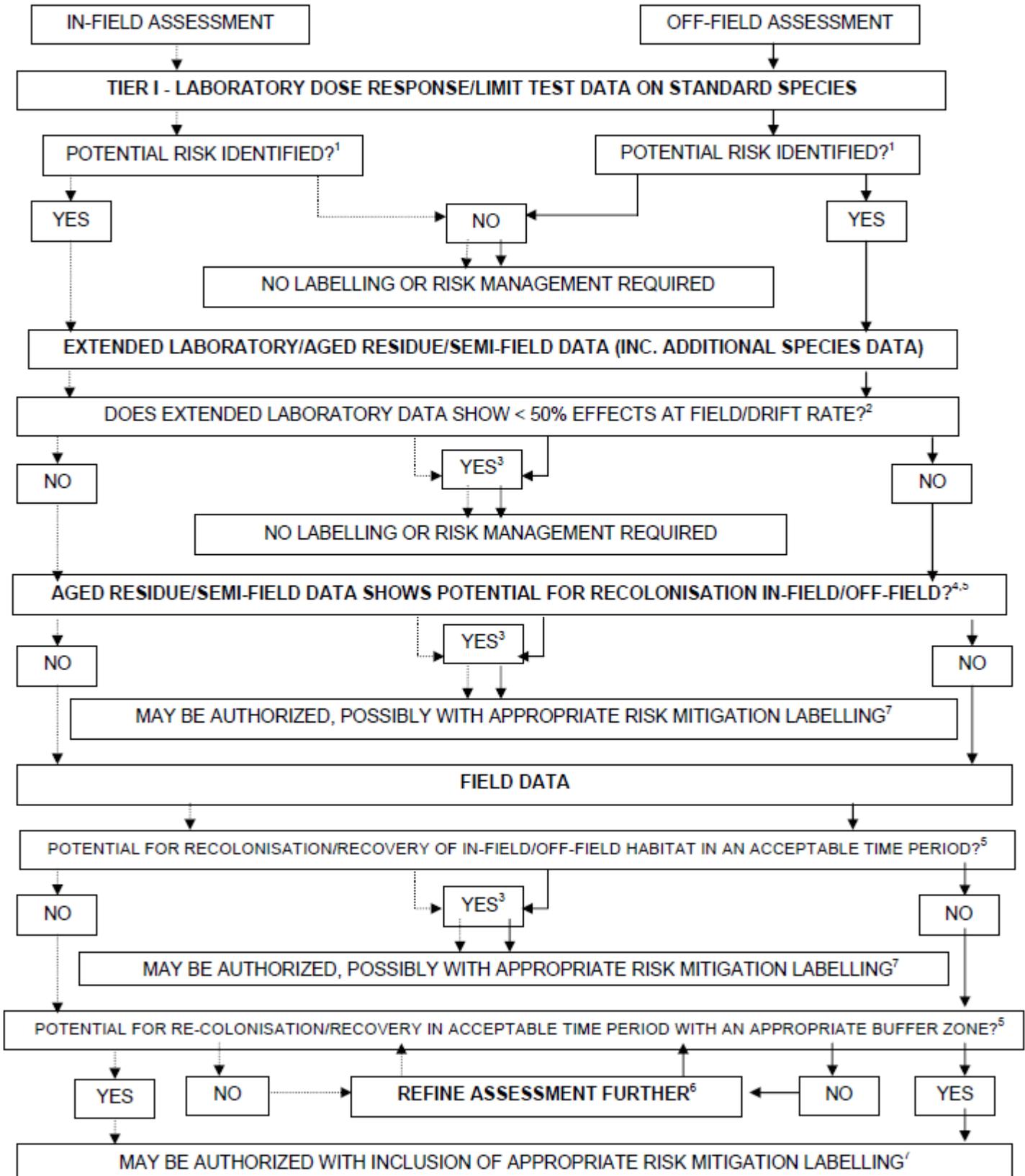
Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)	Relevant 'safety precaution' under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)	Criteria for use of EU 'safety precaution' phrase	CRD's Comments
None applicable, see comments	SPe 1: To protect <i>[groundwater / soil organisms]</i> do not apply this or any other product containing <i>(identify active substance or class of substance, as appropriate)</i> more than <i>(time period or frequency to be specified)</i> .	The phrase shall be assigned to plant protection products for which an evaluation according to the Uniform Principles shows that, for one or more of the labelled uses, that risk mitigation measures are necessary to avoid accumulation in soil, effects on earthworms, other soil-dwelling organisms or soil microflora.	Authorisation for use of a product is only given when the risk to soil organisms/functions is considered acceptable. This will be based on the proposed GAP which may be modified if possible. Enforcement of the '...or any other product...' part of the SPe 1 phrase might also prove unrealistic. It is not therefore envisaged that SPe 1 will be used in the UK to manage risks to soil organisms / functions, or to avoid soil accumulation.

Table 8: Risk mitigation phrases to protect non-target terrestrial plants

<p>Current UK phrase (required text indicated by bold text, italics indicate selection of appropriate term required)</p>	<p>Relevant ‘safety precaution’ under Reg. (EU) No 547/2011 (or Annex V of Dir. 91/414)</p>	<p>Criteria for use of EU ‘safety precaution’ phrase</p>	<p>CRD’s Comments</p>
<p>ADVISORY PHRASE † Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.</p>	<p>SPe 3: To protect <i>[aquatic organism / non-target plants / non-target arthropods / insects]</i> respect an unsprayed buffer zone of <i>(distance to be specified)</i> to <i>[non-agricultural land / surface water bodies].</i></p>	<p>The phrase shall be assigned to protect non-target plants, if an evaluation according to the Uniform Principles shows that, for one or more of the labelled uses, that risk mitigation measures are necessary to avoid unacceptable effects.</p>	<p>Currently no statutory UK phrase exists. Highly active herbicides are required to carry an advisory phrase (†), where the risk remains unresolved following a uniform principals risk assessment, at a distance of 1 m.</p> <p>At present there is no general agreement on the use of buffer zones to protect non-target terrestrial plants in the UK. Therefore, if a risk to non-target plants is highlighted, SPe 3 will not currently be employed and the current UK phrase should be included in the ‘Directions for use’.</p> <p>Occasionally this phrase may be merged with agronomic advice to protect crop plants from spray drift, in which case simply ‘plants’ or ‘broad leaf plants’ may be mentioned. Similar wording may apply to vapour drift.</p> <p>Amateur uses: For amateur use UK products, the following discretionary phrase may be applied: ‘Do not apply during windy conditions so that spray does not drift onto other plants’</p> <p>CRD would not usually insist upon such a phrase but it is suggested to be used when available active substance or professional product uses indicate a risk to this group.</p>
<p>Not applicable, see comments</p>	<p>SPe 4: To protect <i>[aquatic organisms / non-target plants]</i> do not apply on impermeable surfaces such as asphalt, concrete, cobblestones, [railway tracks] and other situations with a high risk of run-off.</p>	<p>Depending on the use pattern of the Plant Protection Product, Member States may assign the phrase to mitigate the risk of run-off in order to protect non-target plants.</p>	<p>See Table 3 regarding the use of this phrase to protect aquatic life and the applicable UK ‘Crop Definitions List’ (previously ‘Crop Hierarchy’) use terminology. As indicated, use on such ‘hard surfaces’ requires a specific assessment and authorisation. Therefore, there would be no need for the SPe 4 phrase and we do not currently envisage its use to protect non-target terrestrial plants in the UK.</p>

Appendix I:

**RISK LABELLING FOR NON-TARGET ARTHROPODS UNDER ESCORT 2:
DECISION MAKING FLOW CHART**



Footnotes:

¹ Calculated Hazard Quotients (HQ) are 2.

² An example of 'extended laboratory' data includes that from studies where laboratory-reared test organisms are exposed to freshly dried pesticide residues applied to natural substrates, e.g. leaves or soil.

³ If data are generated at test concentrations equivalent to drift rates and these identify a drift distance at which the off-field risk posed to non-target arthropods is acceptable, then this may be set as the buffer zone distance.

⁴ The end points of such a study should include mortality and sub-lethal (e.g. reproduction) assessments and determine the magnitude and duration of either effect. It should be noted that when assessing the risk to non-target arthropods off-crop, the risk assessment should not rest solely on the use of aged residues data.

⁵ According to ESCORT 2 and the Environmental Panel's Opinion on this (for the UK), recolonization and/or recovery should occur in-field within one cropping season and off-field within an 'ecologically relevant timescale'.

⁶ Further refinement may be possible via the use of further targeted field work to investigate the potential for recovery of key sensitive arthropods, or the relevance of proposed risk management measures, for example the effect that an unsprayed headland may have on aiding the potential for recovery.

⁷ 'Appropriate risk mitigation' may include statutory or advisory labelling and buffer zones dependent upon various considerations as outlined in the main text.