Residues data requirements for the inclusion of an adjuvant on the official list

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1. BACKGROUND

In line with the procedures for authorisation pesticide products, residues data may be necessary to support an application to include an adjuvant on the Official List. Where a pesticide label carries a specific recommendation for use with an adjuvant, residues data are also required. Since adjuvants are intended to enhance the effectiveness of a pesticide, there is the possibility the use of the adjuvant may have an effect on the pesticide residues present in the crop. Therefore, during the evaluation of an adjuvant, an assessment must be made of the potential risk to consumers following use of the adjuvant with an approved pesticide. In addition, the implications for statutory Maximum Residue Levels (MRLs) must be considered. This has generally been addressed through the provision of comparative residues trials data. This paper provides guidance on when data will and will not be required, and the extent of data likely to be needed.

The following guidelines are intended to:

a) encourage applicants to make reasoned cases for non-submission of residues data where appropriate; and

b) Help applicants design trial protocols relevant to their proposed recommendations for adjuvants.

The guidelines include:

a) General guidance on conducting residues trials for inclusion of adjuvants on the Official List (paragraphs 2.1 to 2.4 and Annex 1). This is in addition to the residues guidance generally applicable to the design of trials and methods of residues analysis for pesticides available on the HSE website.

b) Guidance on the label recommendations for use of adjuvants with pesticides where residues data may not be required (paragraph 2.2 and Annexes 2 and 3).

c) Guidance on extrapolation of residues data between:

- adjuvant types with similar physical and chemical properties (paragraph 2.5 below and Annex 4); and
- Similar pesticides (paragraph 2.5 below).

d) Guidance on countries with comparable climates from which data can be accepted for evaluation without specific justification, and guidance on submitting data from other countries (Annex 5).

e) Guidance on extrapolations of residues data between different crops (paragraph 2.5 and Annex 6)

f) Guidance on the number of comparative trials required in various circumstances (paragraph 2.6 below and Annex 7).

Applicants should note that where residues data owned by a third party are relied upon, for whatever purpose, in support of an application, a valid letter of access from the company owning the data will be required to enable HSE to use those data.

2. RESIDUES DATA

2.1. Basic form of residues data for adjuvants

The extent of residues data to support adjuvants is different to that required for the registration of pesticides. For pesticides, residues trials are intended to provide data on the likely residues following the use of the pesticide using the maximum rates and number of treatments, and the latest timings of application. Trial results reflect the realistic range of residues which could be expected in the crop at harvest as a result of a pesticide applied at the maximum of the approved use. To enable registration of a pesticide on a crop at least eight trials are required for major crops and at least four trials for a minor crop, although there is some scope for extrapolation of residues data to other crops. These data are used as the basis for consumer risk assessments and MRLs.

For adjuvants, data which allow comparison of residue levels are required. This is achieved by using pesticide with adjuvant versus pesticide alone using the same conditions of use for the pesticide within a trial site; the only difference between the treatments in a comparative trial is whether the adjuvant is used or not. The aim is to show whether use of the adjuvant affects resultant residue levels. Data generated are used to assess whether the risk to consumers is acceptable and if statutory MRLs would be exceeded. Residues data for an adjuvant therefore involves an analysis of pesticide residues as a result of using the adjuvant; residues of the adjuvant itself are not determined.

Full details of all the data required in support of an application to include an adjuvant on the Official List are given in The Applicant Guide on the HSE website. In the area of residues, HSE request the following data:

> For uses on crops destined for human or animal consumption, UK residues data (or data from countries with comparable climatic and agricultural conditions) must be submitted, showing the effects of the adjuvant on pesticide residue levels. A relevant range of pesticide products, crops and application conditions should be examined. The data should be presented as a direct comparison with data generated from use of the pesticide on its own and sufficient samples should be analysed to identify the significant effect.

Recommendations for use of adjuvants with pesticides may vary from use with a specific pesticide on a single crop to uses with all pesticides on all crops. Whilst the data requirement given above is sufficiently broad to cover all proposals for uses of adjuvants, it has been recognised that further guidance on generation of residues data is necessary, and that residues data requirements can be rationalised in some cases.

2.2. When are residue data required for Official Listing of adjuvants?

a) No residues data are required for uses on crops not destined for human or animal consumption.

b) For uses on crops destined for human or animal consumption, no residues data will be required where:

- it is proposed that the adjuvant be used with half or less than half the approved rate of pesticide (refer to Annex 2); or
- it is proposed that the adjuvant be applied before a significant part of the consumable part of the crop has developed (refer to Annex 3); or
- similarity with an existing adjuvant can be demonstrated and HSE has a letter of access to appropriate data including residues. Similarity must be demonstrated on the basis of reasoned cases which would include a comparison of physico-chemical properties; chemical composition and mode of action (refer to paragraph 2.5 below and Annex 4).

c) Where the criteria in (a) or (b) cannot be met, the following residues data, or a scientific reasoned case for non-submission of these data, are required:

- UK residues data (or data from countries with comparable climatic and agricultural conditions, refer to Annex 5) must be submitted, showing the effects of the adjuvant on pesticide residue levels
- The field and laboratory phases of residues studies started after 1st January 1993 must be compliant with Good Laboratory Practice (GLP)
- Further guidance on the extent of data required is given in the remainder of this document
- Residue decline trials and residue data generated over more than one season are not required
- Full details of the conditions of use of the adjuvant with pesticides (pesticides, crops, rates and timings of application of pesticides) should appear on the adjuvant label

2.3. Guidance on generating residues data

The advice given should be regarded as guidance only and individual adjuvants and/or proposed uses may require further discussion. In these cases, applicants are encouraged to discuss the situation with HSE at the earliest opportunity.

These guidelines may not be appropriate in all cases. Applicants are advised to consider carefully their intended uses of the adjuvant, the mode of action of the adjuvant, the proposed crops and pesticides. This should form the basis of the decision on whether residues trials are required. In considering whether residues data are required, applicants may submit a reasoned scientific case for not generating residues data. HSE are fully prepared to consider such cases which must be detailed in full in the residues overview (see section 2.4) accompanying their application. Applicants are

advised that if they submit packages which do not reflect the standard and scope of data described in these guidelines, they should provide a justification for this in their residues overview.

Since the residues trials for adjuvants give comparative data sets comparing the levels of pesticide for use with or without the adjuvant, the data will be used to assess any changes in risk to consumers and impact on MRLs. Where there are increases in residues as a result of adjuvant use, additional data may be necessary to allow further assessment. If HSE find it necessary to restrict a proposed use on the basis of residues data submitted, data requirements for the future inclusion of this use on the List Entry will be indicated as a guideline. In some circumstances, it may be necessary to ask Applicants to consider amending the proposed conditions of use of the adjuvant with pesticides.

An increase in residues following use of an adjuvant does not necessarily mean that inclusion on the Official List will not be granted. Recommendation for this use will depend on the assessment of the change in consumer risk and effect on MRLs.

The general principles of the design of trials and methods of analysis of pesticide residues are detailed in guidance available from the HSE website. Some further general guidelines on the approach to generating residues data to support an application are given in Annex 1. The following sections cover guidance on residues overviews, extrapolation of residues data, and extent of data needed to support different types of recommendations for adjuvants.

2.4. Residues overview

A residues overview is required for all applications for the use of an adjuvant on crops destined for human or animal consumption (edible crops), where either residues data or scientifically reasoned cases for extrapolation / non submission of data are submitted.

The following points must be addressed in a residues overview to support a recommendation for adjuvant use:

a) Reasoned case(s) for non-submission of data. This is required where the full scope of data required as given in paragraph 2.2 is not submitted. Any omissions or deviations from the requirements must be fully addressed by a scientifically justified argument.

b) A rationale for the design of the residues trials (this is required when a choice of pesticides and/or crop to represent the proposed use has been made). This is particularly important where there are general recommendations for use of the adjuvant (e.g. for use of an adjuvant with all fungicides on edible crops).

c) A critical appraisal of the trials and results, focusing on whether the data show that residue levels are increased, unaffected or decreased as a result of adjuvant use.

d) The applicability of the results generated to the proposal for use of the adjuvant with pesticides. Where extrapolation of data forms part of this rationale, a case for the validity of the extrapolation must be presented.

2.5. Extrapolation of residues data

The residues data requirement may be addressed by extrapolation of data in one of three ways detailed below. If the data on which the proposed extrapolation is based have previously been submitted to HSE, the applicant must state where and when such data were provided. Where the data on which the extrapolation is based are not owned by the applicant, a valid letter of access will be required to enable HSE to use the available residues data

a) *Extrapolation between crops*

The standard crop extrapolations generally permitted for pesticides (refer to Annex 6) are applicable to adjuvants. There is also a further increased range of crop extrapolations which are applicable only to adjuvants. Full details are given in Annex 6.

b) *Extrapolation between pesticides*

Within a chemical class of pesticides, extrapolation of residues data may be possible from one representative pesticide to all others within that class. For example, data generated using a representative morpholine fungicide can be extrapolated to support authorisation for use of the adjuvant with all morpholine fungicides.

c) *Extrapolation between adjuvant types*

Extrapolation of residues data based on adjuvants with similar physico-chemical properties may be acceptable. A case for this must be presented in the applicant's residues overview (refer to section 2.4) in line with the guidance detailed in Annex 4. Applicants should note that HSE will only be able to carry out a comparison of the physico-chemical properties between 'similar' adjuvants where a valid letter of access has been received from the company owning the data on the existing product.

2.6. Guidance on residues data needed to support different types of recommendations for adjuvants

If the rates and latest timings of application of the pesticide(s) and adjuvant are such that residues data are required, the number of trials needed will be dependent on the scope of the proposed recommendation. The type of data set required to support a recommendation for use with all pesticides on all crops will be more extensive than that needed to support a named crop/pesticide combination. Specific guidance on the number of trials required to support various recommendations are given in Annex 7.

ANNEX 1: GENERAL GUIDANCE ON CONDUCTING RESIDUES TRIALS

This guidance is complemented by the guidance on generating residues data available on the HSE website.

Choice of pesticides

Where there is a choice of pesticides that could be used in trials, the aim should be to include active ingredients which would lead to positive residues at harvest to allow easier comparison of data (adjuvant with pesticide versus pesticide alone).

Rates and timings of pesticide(s) and adjuvant.

The amount of adjuvant used in trials must be the maximum proposed spray concentration of adjuvant.

Unless the proposed use of adjuvant recommends a lower rate of pesticide than the maximum approved rate, data must usually conform to the approved rates, number of applications and latest timing of application of the pesticide(s). If trials have been conducted using an earlier time of application of the pesticide than the latest approved timing the justification for this must be fully explained (e.g. the adjuvant is used to improve translocation of a systemic pesticide, possibly resulting in higher residues).

Residue definition

Applicants must ensure that the correct residue definition is applied to the pesticide being analysed. The residue definition describes the residue (any pesticide including its metabolites, derivatives and related compounds) which is considered to be of toxicological significance.

Crop components to be considered.

Residues data are needed when a significant part of the consumable part of the crop is present at the time of application. Consumable part of the crop refers to both animal and human consumption. Therefore, it will be necessary to sample and analyse for residues the parts of the crop which are consumed by animals and those consumed by humans. For example, for cereals where application is to be made after GS 52, both grain and straw must be analysed.

Methods of analysis

Full details of the methods of analysis must be submitted supporting the analysis phase of residues trials. The methods must be appropriately validated. Guidance on methods of analysis in support of residue trials data is available on the HSE website. Recoveries from fortified samples must be submitted, together with representative chromatograms (standard, untreated sample, fortified untreated sample and typical sample). The limit of determination must be reported and justified.

Storage stability of residues

Storage stability data is required to support residues trials if samples from the trials are stored for over 30 days prior to analysis. Guidance on generating storage stability of residues data is available on the HSE website.

Decline data

Decline data are not specifically required, although decline data comparing the outcome of residues as a result of pesticide alone and pesticide with adjuvant can provide useful information. Where there are increases in pesticide residues as a result of using adjuvants, decline trials may indicate the influence of timing of application on residues.

Number of trials

Refer to Annex 7 for details.

ANNEX 2: RESIDUES DATA AND RECOMMENDATIONS FOR HALF OR LESS THAN HALF THE APPROVED RATE OF PESTICIDE

Residues data **are not** required where the adjuvant is recommended for use with:

'*half the approved rate of pesticide*':

If the maximum individual dose of pesticide recommended on the label is N, half the approved rate of pesticide is 0.5N. If up to three maximum individual doses (N) of pesticide are recommended on the label, half the approved rate of pesticide is 3 x 0.5N. If the maximum individual dose is N, but in addition split doses of 2 x 0.5N only are recommended on a particular pesticide label, then half the approved rate of pesticide is either 1 x 0.5N or 2 x 0.25N rate.

The draft List Entry, draft label or covering letter submitted with an application must clearly state where a recommendation is being requested for use with half rates of pesticides.

ANNEX 3: REQUIREMENTS FOR RESIDUES DATA ACCORDING TO CROP GROWTH STAGES

No residues data are required when it is proposed that the pesticide product and adjuvant be applied before a significant part of the consumable part of the crop has developed. 'Consumable part of the crop' refers to both animal and human consumption. It is intended that the relevant growth stages before which residues data are not needed is when the edible part of the crop is just starting to show, examples are given in the following table.

For crops not specifically mentioned, the applicant must present a logical case to support their request. Applicants may wish to discuss the approach for these crops with HSE prior to conducting trials. The draft List Entry, draft label or covering letter submitted with an application must clearly list the recommendations which are being requested for use with pesticides before the growth stages in the following table.

Growth stages for crops before which residues data are not needed

Crop	Growth stages before which residues data are not needed ref [1]
Apples/pears	up to and including fruit 5 - 10 mm (EPPO code 71)
Cherry/plum	up to and including first fruit set (EPPO code H)
Almond, apricot and peach	up to and including first fruit set (EPPO code H)
Grapes	up to and including first fruit set (EPPO code 27)
Strawberries	up to and including first fruit development (EPPO code 70)
Raspberries	up to and including first fruit set
Blackcurrant	up to and including first visible green fruitlet (EPPO code 6)
Cucumber	up to and including first fruit set
Tomato	up to and including first fruit set on first truss
Beans	up to and including first pod set (EPPO code 204)
Vining Peas	up to and including flat pod (EPPO code 205)
Edible podded peas	up to and including pod set (EPPO code 204)
Oilseed rape	up to and including 10% potential pods (code 5.1, Sylvester-Bradley, 1985)
Linseed	up to and including 10% capsules formed (code 51, Freer 1991)
Sugar beet	up to and including 6 fully expanded leaves (EPPO code 23)
Hops	up to and including cone set (EPPO code 71)
Cereals	up to and including GS52 (1/4 inflorescence)
Maize	up to and including tip of tassle visible (EPPO code 53)
Brussels sprout	up to and including lateral buds begin to develop
Potatoes	up to and including tuber initiation
Cauliflower	up to and including cauliflower heads begin to form; width of growing tip up to 1 cm2
Lettuce	varieties forming heads: up to and including heads begin to form
	varieties not forming heads: up to and including leaf rosette has reached 30% of the diameter typical for the variety

[1] Meier, U. (2001) Growth Stages of Mono and Dicotyledonous Plants. BBCH Monograph, Federal Biological Research Centre for Agriculture and Forestry

ANNEX 4: EXTRAPOLATION BETWEEN ADJUVANT TYPES WHICH HAVE COMPARABLE PHYSICO-CHEMICAL CHARACTERISTICS

Extrapolation of residues data based on adjuvants with similar physico-chemical properties may be acceptable. A reasoned case for this must be presented in the applicant's residues overview (refer to section 2.4) and would be based on a comparison of physico-chemical properties as given in the table below. These are not additional data required for the Official Listing of an adjuvant, the information in the table below is only needed to carry out comparisons of adjuvants. Where applications are submitted on this basis, such a comparison needs to be provided for each of the adjuvants under discussion.

Applicants should note that HSE will **only** be able to carry out a comparison of the physico-chemical properties between 'similar' adjuvants where a valid letter of access has been received from the company owning the data on the existing product.

Physico-chemical data required for a case for comparability of adjuvants

Property	Comment
Chemical composition	Specification of the technical active component using IUPAC nomenclature[2]
Formulation type	using CropLife International definitions for pesticide formulation types where applicable[3]
Mode of action	An explanation of the mode of action
Hydrophile-lipophile balance (HLB)	HLB[4, 5,6] ;please state the temperature relevant to the determination of HLB
Octanol water partition coefficient (Kow)	
Wetting capability	for example: CIPAC MT 53 - wettability[7]
Water solubility	
Surface tension	
Viscosity	

[2] International Union of Pure and Applied Chemistry (IUPAC): Nomenclature of Organic Chemistry. Pergamon Press

[3] Appendix E, Manual on development and use of FAO and WHO specifications for pesticides, November 2016

[4] Griffin W.C. J. Soc. Cosmetic Chemists 1, 311 (1949); 5, 4 (1954

[5] Becher P. Encyclopaedia of emulsion technology. Dekker, 1981.

[6] Shaw D.J. Introduction to colloid and surface chemistry. Butterworth-Heinemann Ltd, 1992

[7] CIPAC Handbook F. Eds Dobrat and Martijn. Publ. CIPAC Ltd, 1994

ANNEX 5: COUNTRIES WITH COMPARABLE CLIMATIC AND AGRICULTURAL CONDITIONS TO THE UK

In line with current residues guidelines, data from other countries can be used to support an application for inclusion on the Official List for an adjuvant. Data from the following countries in the Northern and Central European climatic zone are considered to be comparable to the UK:

Sweden, Norway, Finland, Denmark, Ireland, Northern France, Belgium, the Netherlands, Luxembourg, Germany, Poland, Czech Republic, Slovakia, Austria, Switzerland, Hungary, Estonia, Latvia, Lithuania, Romania, Slovenia.

Data from other areas may be used; for example, where the physico-chemical properties of the pesticide and adjuvant are such that residues are unlikely to be affected by geo-climatic conditions and that agricultural practices are sufficiently similar. Where data from other countries not listed are submitted, this must be accompanied by full weather details and a justification for their relevance.

ANNEX 6: A SELECTION OF REPRESENTATIVE CROPS AS A BASIS FOR CROP EXTRAPOLATIONS

For full details of crop extrapolations for residues data for pesticides, and also for adjuvants, please refer to guidance on generating residues data on the HSE website

Crop extrapolations which are specifically applicable to adjuvant residues trials

Extrapolation from	To
Wheat, or barley, or oats	All cereals, and grassland*
Rapeseed	All oilseeds
Sugar beet, or carrots, or potatoes	All root and tuber vegetables
Vining peas (peas and pods analysed)	All legume vegetables (fresh)
Cauliflower, Brussels sprout or cabbage or kale, and lettuce	All brassica vegetables and leafy vegetables and fresh herbs
Lettuce	All leafy vegetables and fresh herbs
Apples	All pome fruit, stone fruit and tree nuts
Tomato	All Solanacea (note: this does not include potatoes)
Cucumber	All Cucurbits
Tomato and cucumber	All fruiting vegetables

*extrapolation of residue data obtained using an immature cereal crop is only appropriate to a proposed grassland use. Extrapolation of residues data to cover grassland forage use is not appropriate if data are only available for cereal grain and straw.

NB: to see the commodities listed within the crop groups (indicated in italics) please refer to The Crop Definitions List on the HSE website

ANNEX 7: EXTENT OF DATA NEEDED TO SUPPORT VARIOUS RECOMMENDATIONS

This Annex gives the minimum number of comparative trials required to support various adjuvant recommendations for edible crop uses.

Residues data for adjuvants are generated by conducting comparative trials. In this context, a comparative trial is taken to be one trial for a pesticide plus adjuvant treatment and one trial for the pesticide alone. The number of trials must be sufficient to identify any significant effect of the adjuvant on pesticide residue levels.

For uses of adjuvants with pre-harvest uses of pesticides, not including desiccants

(a) *A proposal for use of the adjuvant with a specific pesticide on a single crop*

Four comparative trials are required.

(b) *A proposal for use of the adjuvant on all edible crops with all fungicides; or all herbicides; or all insecticides*

The table below shows the number of pesticides which must be represented across edible crops for each group of pesticides. A range of crops covering representatives of a root crop and/or leafy crop, fruit crop, and cereal must be included. Four comparative trials must be carried out for each pesticide and crop combination chosen.

- Sugar beet can be used to represent both leafy and root crops, provided both the root and leaves are analysed for residues

The number of pesticides which need to be included to support a recommendation for all herbicides, fungicides, or all insecticides on all edible crops

Adjuvant recommended for use with:	Number of different pesticides to be included	Individual types which must be included[8, 9]	Number of comparative trials for each pesticide/crop combination	Number of comparative trials required
all herbicides	3	phenoxypropionate + two others	4	12
all fungicides	4	i. benzimidazole ii. triazole or morpholine + two others	4	16
all insecticides	3	i. organophosphorus + two others	4	12

[8] Agrochemicals: Preparation and mode of action. Cremlyn R.J. Ed. Wiley. (1991); *A source of information on the major chemical groups of pesticides*

[9] The chemistry of pesticides. Hassall K.A. MacMillan Press. (1982): *Text which gives an overview of the chemistry and mode of action of pesticides covering a range of chemical groups*.

Examples of how this works in practice are:

- To support a proposal for use of an adjuvant with all fungicides on edible crops 16 trials are needed:

  (4 x fungicide A/root crop) + (4 x fungicide B/fruit crop) + (4 x fungicide C/leafy crop) + (4 x fungicide D/cereal crop) = 16 comparative trials.

- To support a proposal for use of an adjuvant with all insecticides 12 trials are needed:

  (4 x insecticide A/root crop or leafy crop) + (4 x insecticide B/fruit crop) + (4 x insecticide C/cereal crop) = 12 comparative trials.

(c) *A proposal for use of the adjuvant with all fungicides; or all herbicides; or all insecticides on a single crop*

The table below shows the number of pesticides which must be represented on a single crop for each group of pesticides. Four comparative trials must be carried out for each pesticide and crop combination chosen.

The number of pesticides which need to be included to support a recommendation for all herbicides, for all fungicides, or all insecticides for use on a single crop

Adjuvant recommended for use with:	Number of different pesticides which need to be included	Individual types which should be included dependent on the approved uses[8, 9]	Number of comparative trials for each pesticide/crop combination chosen	Number of comparative trials required
all herbicides	2	i. phenoxypropionate + one other	4	8
all fungicides	3	i. benzimidazole ii. triazole or morpholine + one other	4	12
all insecticides	2	i. organophosphorus + one other	4	8

Examples of how this works in practice are:

- To support a proposal for use of an adjuvant with all fungicides on a single edible crop 12 trials will be needed:

  (4 x fungicide A) + (4 x fungicide B) + (4 x fungicide C) = 12 comparative trials.

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- To support a proposal for use of an adjuvant with all insecticides on a single edible crop 8 trials will be needed:

  (4 x insecticide A) + (4 x insecticide B) = 8 comparative trials

(d) *A proposal for use of the adjuvant with a single pesticide on all edible crops.*

Three comparative trials for each of three different 'crop groups' using the proposed pesticide and adjuvant. The range of crops must include representatives of the following 'crop groups': root crop and/or leafy crop, fruit crop, and a cereal.

An example of how this works in practice is:

- To support a proposal for use of an adjuvant with pesticide X on all edible crops 9 trials will be needed:

  (3 x pesticide X/root crop or leafy crop) + (3 x pesticide X/fruit crop) + (3 x pesticide X/cereal crop) = 9 comparative trials.

(e) *A proposal for use of the adjuvant with all pesticides on all crops*

Three comparative trials must be carried out for each pesticide and crop combination in accordance with the requirements shown in the table below.

The number and combination of residues data required to support a recommendation for the use of an adjuvant with all pesticides on all crops.

Crop group	Pesticide (refer to the table above for details of the types of pesticides which must be included)	Number of comparative trials
cereal	a herbicide	3
cereal	an insecticide	3
cereal	a fungicide	3
leafy crop	a herbicide	3
leafy crop	an insecticide	3
leafy crop	a fungicide	3
fruit crop	an insecticide	3
fruit crop	a fungicide	3
root crop	an insecticide	3
		TOTAL 27 comparative trials.

Note: ideally a different herbicide, fungicide, or insecticide should be used for the different crop groups

For uses of adjuvants with desiccant uses of pesticides:

Where pesticides can be used as herbicides and desiccants, trials generated to reflect herbicide use would not support use of desiccant. This distinction is made due to differences in timing and/or dose. Therefore, an early use in the crop as an herbicide would not support a much later, pre-harvest application as a desiccant with adjuvant. Data must be generated to enable use of adjuvants with desiccants on edible crops to be supported. Four comparative trials are required. The application regime used in the

trials must be relevant to the proposed use.

For uses of adjuvants with post-harvest uses of pesticides:

A minimum of four comparative adjuvant residues trials should be conducted for a recommendation for a use of an adjuvant with a particular pesticide. For a proposal to use an adjuvant with all post-harvest uses of pesticides, a minimum of eight comparative adjuvant residues trials are required (four for each of two representative pesticides). The application regime used in the trials must be relevant to the proposed use. Since residues data for adjuvants are comparative and because pesticide residues from post-harvest use may be variable, it is recommended that bulk samples are analysed.

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

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