



CHEM (CHEMICALS, HEALTH AND ENVIRONMENT MONITORING) TRUST'S RESPONSE TO DEFRA'S CONSULTATION ON THE IMPLEMENTATION OF EU PESTICIDES LEGISLATION

30th April 2010

Introduction to CHEM Trust

CHEM Trust has a **mission** to prevent man-made chemicals from causing long term harm to wildlife or humans by trying to ensure that chemicals which cause such harm are substituted with safer alternatives.

CHEM Trust was set up in April 2007, with support from WWF-UK on the closure of its Toxics Programme in recognition of the threats chemicals pose not only to wildlife, but also to human health. In addition, CHEM Trust is funded by Greenpeace Environmental Trust and further financial support comes from various charitable trusts and grant making foundations.

CHEM Trust aims to increase awareness of the role chemical exposures play in harming wildlife and human health, and thereby provide the impetus for better chemicals legislation and health protection policies. Our briefings have been widely disseminated, and include translations in Russian, Polish, Czech, Italian, Spanish, French, German, Slovenian, and English. They include the following topics:

- i) "What could new EU chemicals legislation deliver for public health?" reviewing the health benefits that the new EU Regulation (REACH¹) could provide (2007).
- ii) "Chemicals compromising our children" which reviews the potential damage chemicals may cause to the developing brain (2007).
- iii) "Breast cancer and exposure to hormonally active chemicals: An appraisal of the scientific evidence" a report for medical professionals and scientists by Professor Andreas Kortenkamp of the London School of Pharmacy. This report was launched in the European Parliament in April 2008.
- iv) "Factors influencing the risk of breast cancer – established and emerging" a CHEM Trust briefing for the public on the potential role of chemicals in breast cancer (2008).
- v) "Breast cancer: Preventing the preventable" a leaflet for the public.
- vi) "Effects Of Pollutants On The Reproductive Health Of Male Vertebrate Wildlife - Males Under Threat" by Gwynne Lyons showing that males

¹ REACH is the Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1907:EN:NOT>

from each of the vertebrate classes, including bony fish, amphibians, reptiles, birds, and mammals, have been feminised by chemicals in the environment (2008). A summary, in German, was published in 2009 by BUND (FOE Germany).

- vii) “Male reproductive health disorders and the potential role of exposure to environmental chemicals” by Professor Richard Sharpe of the Medical Research Council (MRC) (2009).
- viii) “Men under threat: The decline in male reproductive health and the potential role of exposure to chemicals during in-utero development” a fully referenced briefing written by Gwynne Lyons (2009).
- ix) “Men under Threat” a leaflet for the public (2009).

All publications are available on CHEM Trust’s web site: www.chemtrust.org.uk

CHEM Trust’s Vision is a world where humans and wildlife co-exist with a sustainable chemical industry and where chemicals play no part in causing impaired reproduction, deformities, disease, or deficits in neurological function.

CHEM Trust’s work programme is currently focussed on securing better controls over chemicals that cause long term harm, including persistent and bioaccumulating chemicals (which build up in our bodies or in wildlife and are passed from mother to baby in utero or via breast milk) and chemicals which can disrupt hormones (endocrine disrupting chemicals).

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CHEM TRUST'S RESPONSE TO DEFRA'S CONSULTATION ON THE IMPLEMENTATION OF EU PESTICIDES LEGISLATION

Overview of CHEM Trust's Response

CHEM Trust welcomes the new EU pesticides legislation, which we feel has the potential to significantly reduce the impact of pesticide use on the health of humans and wildlife.

It is important to ensure that this legislation is implemented to deliver reduced exposure of the public to pesticides, and to eliminate exposure to the most problematic pesticides. In particular, precautionary definition and implementation of the cut off criteria, including criteria for hormone disrupting chemicals, is necessary such that pesticides with these undesirable properties are subject to phase out. Particular consideration should be given to vulnerable groups such as pregnant women, children, the infirm and the elderly.

We consider it to be a fundamental right that people in their own homes and gardens should not be exposed unwittingly or unwillingly to pesticides used by others. We also consider that other vulnerable groups, for example, people in hospital and children attending schools near fields need to be particularly protected from exposure to pesticides.

In addition, we consider that the UK needs to build on its health expertise and set up a state-of-the-art, long-term health monitoring programme of those exposed to pesticides.

CHEM Trust supports, in all cases, full cost recovery from pesticides manufacturers in line with the polluter pays principle. It is important that the cost of pesticide products should reflect their true costs, including those related to regulation to deliver protection of the environment and human health. In the drive to sustainability it is important to ensure that these costs are not externalised. Therefore, in response to question 17, CHEM Trust's preferred option would emphatically underline the need for full cost recovery from users.

Section 1 of CHEM Trust's response, below, relates to much-needed provisions for human health protection.

CHEM Trust has joined with other organisations to put forward proposals relating to the protection of biodiversity and these points are re-iterated in Section 2. Much of our response relating to the protection of biodiversity will also serve to protect human health, including workers, and that is very much welcomed.

SECTION 1: CHEM TRUST'S RESPONSE TO THE DEFRA CONSULTATION WITH RESPECT TO KEY DEMANDS FOR THE PROTECTION OF HUMAN HEALTH

We note that Article 7 of the Sustainable Use Directive (SUD) on information and awareness-raising requires Member States to take measures to inform the general public about the risks relating to pesticides and to promote and facilitate information and awareness raising programmes to ensure accurate and balanced information is available to the public.

Furthermore, Article 7 requires Member States to put in place systems for gathering information on pesticide acute poisoning incidents as well as chronic poisoning developments among groups that may be exposed regularly to pesticides such as pesticide operators, agricultural workers, or persons living close to pesticides application areas.

Q11: Do you think that more information should be provided to the general public on the risks and potential effects of pesticides? What information would be useful and how should it be provided?

CHEM Trust considers that more information, particularly unbiased and up-to-date information should be collated for the general public on the risks and potential effects of pesticides. This should relate both to particular ingredients and to pesticides in general. For example, with regard to particular ingredients, CHEM Trust considers that for each active substance currently authorised for use in the EU there should be an official on-line data base summarising the available toxicity information and main areas of concern in layman's language. As an example of the sort of material we would like to see made available, the US Agency for Toxic Substances and Disease Registry provides very accessible "Toxicological Profile Information Sheets."² These Information Sheets could serve as a model for Pesticide Toxicological Profile Information Sheets. This could be coordinated centrally in the EU, with translations held on the web-site of the regulatory agencies in Member States. The web-sites of the regulatory agencies of the Member States could be linked to each other, such that migrant workers from elsewhere in the EU would be able to find information in their relevant language. The UK Chemicals Regulation Directorate (CRD) could put out to tender a research project to draft such Information Sheets for pesticides used in the UK, building in sufficient funding for stakeholder and expert peer review.

With regard to the effects of pesticides in general, we consider that in particular, leaflets, briefings and reports should be written in order to provide well balanced summaries of the concerns raised in recent scientific papers which suggest that pesticide exposures are associated with increased incidence of some cancers, Parkinson's disease and other neurological effects. Such state of the science overviews should include the potential role of endocrine disrupting pesticides in hormonal cancers, diabetes and obesity.

² Available free on-line at <http://www.atsdr.cdc.gov/toxpro2.html#bookmark05>

We consider that state of the science briefings summarising the role pesticides in general may play in certain diseases and disorders should be contracted from leading academics in the field, and subjected to peer review by an advisory group of experts, including stakeholders. These should then be available on official websites in order to provide the public with a well-balance comprehensive summary of *the concerns* related to pesticide use. Summary leaflets should also be considered for point of sale, where in addition, well researched and authoritative information on non-pesticide control strategies should also be available (see Section 2).

We note that in such an exercise much epidemiological data on the chronic health effects will necessarily relate to pesticides in use some 20 or 30 years earlier. However, this is inevitable with cancer epidemiology, and nevertheless, such data will serve to highlight the concerns about the potential effects of pesticides and the need for well-planned, long-term health surveillance of those exposed.

In addition to the specific summary documents outlined above, CHEM Trust considers that there is a need to examine how Advisory Committees report their findings and summarise data. This is because we consider that advice given by Advisory Committees often uses terminology that is not accessible to the public, and which does not adequately portray the concerns of many experts. As an example, scientists often use phraseology that does not convey the degree to which, based on all the available data, they consider it likely or not that some substance or group of substances are impacting human health. For example, in their Statement on Prostate Cancer and Pesticide Exposure, the Committee on the Carcinogenicity of Chemicals in Food, Consumer Products and the Environment states that “We consider that the individual studies to date of exposure to pesticides in farmers/farm-workers and in pesticide manufacturing workers provide no consistent support for an association with prostate cancer. A recent meta-analysis by Van Maele-Fabry et al (2006) provides some limited evidence of a weak association between pesticide exposure in manufacturing workers and prostate cancer....Causality cannot be inferred from the available data” (COC/07/S1 - March 2007). However, given the multiplicity of exposures and causal factors that might be involved, it would be startling if causality could be inferred from such data. We recommend that Advisory Committees move towards an approach which firstly lays down in scientific terminology the state of the science, but then adds another step, whereby this is crystallized into an easy to understand conclusion, based on expert judgement. For example, we suggest that Advisory Committees should move towards giving advice based on expert judgement as to what *they estimate* is the percentage probability that pesticide exposure is involved in some cases of prostate cancer, rather than, for example, report that causality can not be established from the available data. Such an approach, which is rather like that currently adopted by weather forecasters estimating the percentage chance of rain, would at least convey in a transparent manner, both the current uncertainty and the best estimate or opinion of experts who have looked in depth at the available data.

Furthermore, when incidents occur, we consider that some regulatory bodies tend to phrase their information in a manner that plays down the potential risks of substances, perhaps because of (a) not wanting to cause alarm which would lead to unnecessary and unproductive stress for the public and (b) fear of appearing to be

failing in their job. CHEM Trust considers that regulatory agencies should seek to provide balanced advice that summarises the concerns, and includes, if possible, advice to those that might so wish, on how to reduce their exposure, if relevant.

Q12: Can you suggest any improvements to the information gathering systems used by the government?

Given the epidemiological and medical expertise in the UK, CHEM Trust considers that the UK should put in place a large, well funded, long-term, prospective epidemiological study looking into the long-term health effects that may manifest in pesticide workers and their families. Only by doing such work and making long-term investments, including looking for disease associations with exposure to various named pesticides, will the real, long-term consequences of pesticide use become apparent. A UK study programme, similar to that of the US Agricultural Health Study,³ should be set up particularly to look at cancer incidence, birth defects in the children of those using pesticides, and neuro-developmental problems including the incidence of diseases of old age, such as Parkinson's disease. The content and development of a long-term programme should also give due consideration to coordination of national surveillance programmes within the EU. A large, epidemiological, ongoing surveillance programme should also endeavour to use data drawn from pesticide incident reports, because in some cases it may be useful and informative to follow-up members of the public who have been exposed to levels of concern. Therefore, incidents considered by the Pesticide Incident Appraisal Panel could be put forward for follow-up, to determine whether there were any chronic health effects.

Research should also be directed at biomonitoring (monitoring of human tissues to assess internal human exposure) and identifying biomarkers of exposure, in order to get better information on exposures, which can, for example, be used in epidemiological studies. Research is also needed to better understand 'sensitive windows of exposure', as timing of exposure needs to be given due consideration in epidemiological studies.

Q17: Re preferred approach for aerial applications

CHEM Trust prefers Option 2, but considers that aerial application of pesticides should be so tightly restricted that it is a truly very exceptional activity, confined to upland areas and only done for conservation benefit, where other equipment is unable to operate. CHEM Trust welcomes the EU-wide legislative requirement that those wishing to carry out aerial spraying must obtain the permission of a regulatory authority, and we consider that this requirement should be for each individual application. We note that reconnaissance of the surrounding area within 1500 metres must be done. Other non-conservation management aerial spraying should, in general, be prohibited, certainly in all cases where non-aerial spraying is possible. However, if there are short term derogations / permits which can be applied for to the regulatory authority on a case by case basis, we believe that these should only

³ See <http://aghealth.nci.nih.gov/background.html>

be granted where there are grounds of national or over-riding socio economic interest. Moreover, CHEM Trust considers that such permits should not be granted within 500 meters of residences or nature reserves without the expressed consent of those in residence or the relevant nature body.

In summary, CHEM Trust believes that aerial spraying should be carried out only in really exceptional circumstances, with additional safeguards to protect the public, and that there should be a consent-based control system, with full cost recovery from users.

Article 12 requires Member States to minimise or prohibit the use of pesticides in areas used by the general public or vulnerable groups, in conservation sites and recently treated areas, used by or accessible to agricultural workers.

Q21 & 22: Re protection of specific areas and whether it is appropriate to prohibit the use of pesticides in public spaces.

CHEM Trust favours Option 3, with a prohibition of use in amenity situations and public areas (but not necessarily in conservation areas – see Section 2). We do not consider that a voluntary approach provides the level of security required to protect human health. The Consultation document notes that as a whole the amenity sector does not currently adopt best practice. Therefore, a voluntary approach should no longer be relied upon, and pesticide use in schools, parks and other areas frequented by pregnant mothers, children and the elderly should be phased out.

CHEM Trust considers that the prohibition of pesticide use in public spaces and conservation areas is a very appropriate measure in order to afford a high level of health protection. Indeed, we consider that such a measure is long overdue given the availability of suitable alternatives such as flaming, manual weeding, infra-red treatments or allowing a more ‘weedy’ appearance. We accept, however, that there will be a need for certain derogations, subject to obtaining permission of the CAs, for example, for infestations bringing a health hazard and for the control of invasive species.

Article 10 of SUD allows Member States to include in their National Action Plans (NAPs) provisions on informing people who could be exposed to spray drift (as provided for in Article 31 and 67).

Q29: Re spray notification and disclosure of records.

CHEM Trust’s preferred approach is as laid out in Option 3, namely that there should be advance notification of pesticide use, by making it a requirement of use in authorisations for all pesticides. We consider it crucial that neighbours **who have requested to be notified** in advance of spraying operations should receive such notification. This would allow them to put in place measures to reduce their own exposure, and that of their families as much as possible, by closing windows, not hanging clothes to dry in the garden, or not allowing children to play in the garden

whilst spraying was being undertaken in the vicinity. It is alarming to note that US research has reported that pregnant women living in an agricultural area have higher levels of organophosphate insecticide metabolitesⁱ and other pesticide residuesⁱⁱ in their urine compared to the general population, and that such exposures to organophosphate pesticides appear be linked with negative effects on brain function, including effects on mental development and developmental problems in toddlers.ⁱⁱⁱ This highlights that it is imperative that such vulnerable groups are able to get access to information which allows them to reduce their exposure as much as possible. CHEM Trust's forthcoming review of the potential role pesticide exposures play in many cancers also serves to emphasise that in the interests of public health, members of the public, and those using pesticides, should be provided with all necessary information to enable them to reduce exposures. In addition to summarising the evidence linking pesticide exposures to certain adult cancers, the CHEM Trust review also summarises the evidence linking childhood cancers with parental exposures prior to conception, in-utero exposures and direct childhood exposures.

We consider that just notifying people when pesticides are going to be sprayed adjacent to their homes does not fully address the issue of 'toxic trespass', as some pesticide will inevitably end-up in people's gardens and homes. We suggest, in addition, "no spray buffer zones" of a set number of metres, should be made mandatory around residences.

With regard to the public getting access to specific information on which pesticides have been used, via the Competent Authority, we agree that the costs for this should fall primarily on government, who should look for some mechanism to re-coup these from the industry.

Q31: Do you think it appropriate for all or some of the costs to government to be offset by charging enquirers a reasonable fee for handling requests for spray records?

CHEM Trust does not consider it appropriate for local residents or those potentially exposed to be charged a reasonable fee for handling requests for spray records. Neither do we consider it appropriate for public health researchers or environment and health NGOs to be charged for such data. Only where an enquiry is made in the interests of a private company, or market researchers in the interests of a commercial body, do we consider that a reasonable charge is justified. CHEM Trust would, however, like to see this service financed via cost recovery from pesticide manufacturers in general. This is because, in the drive for sustainability, it is right that these costs should not be externalised, but instead be borne by the producer.

Q32: Do you consider that organisations publishing advance spray schedules would be an effective way of increasing public information?

Yes, and CHEM Trust considers this should be mandatory for local authorities.

Q33: Re public information signs where the public may have access to sprayed areas

CHEM Trust strongly believes that it should be a mandatory requirement to put up public information signs on rights of way or other sprayed areas to which the public have access, and that these should be up for a specific time period both in advance and after spraying.

SECTION 2: CHEM TRUST'S RESPONSE TO THE DEFRA CONSULTATION WITH RESPECT TO MEASURES NECESSARY FOR THE PROTECTION OF BIODIVERSITY.

This consultation response is from a group of environmental NGOs who are working together to ensure that crop protection products have minimal impacts on biodiversity. The NGOs that were involved in writing this response and support its content are: Buglife, CHEM Trust, Plantlife, PAN UK and RSPB. This response focuses on those areas identified as being directly or indirectly damaging to biodiversity and suggests measures to ensure reduced impacts.

Q1: What is your preferred approach for a National Action Plan and why?

The preferred approach is Option 3 as it ensures that the plans are both ambitious and proactive, as a result the plans will go further to promote action on the ground and so effectively deliver the Sustainable Use Directive. The current National Action Plans are not sufficiently proactive, listing initiatives but with limited action. Plans also need to be flexible in relation to local and regional differences and these differences must be considered when plans are implemented. All plans should deliver work based on the precautionary principle and take rapid action when there is evidence that significant harm might be anticipated. Plans should also focus on the research and development of non-chemical alternatives that are relevant to plan themes.

We would like to see compulsory reduction targets for high risk chemicals and for chemicals being phased out. However, the reduction targets would need to be flexible in relation to the type of chemical, its usage and likely impacts. Therefore, we agree to the use of reduction targets as part of the NAP. However we feel that the section describing a method for implementing reduction targets is inadequate. These targets should be defined, by the type of chemicals, its usage and impacts; for example a product that is a high risk to pollinators (nectar/pollen feeding insects) should have higher reduction targets on flowering crops.

Q2: How can NAPs best be used to reduce the risks associated with pesticide use to human health and the environment?

NAPs should both reduce risk and the current impacts of pesticides. Targets within the plans must be quantitative, and qualitative targets should only be used if

quantitative targets are unrealistic or if used in conjunction with quantitative targets. All targets within the plans need to have organisations responsible for them and the action plans need to identify 'leaders' of plans or sections of the plans in order to coordinate action and drive them forward. There needs to be meaningful timetables for achieving targets, including a monitoring program to assess progress. NAPs must be living documents that can be updated when required and should be reviewed annually. Action plans need to be clearly structured and any overlap between plans should be clearly defined and with coordination between plans to facilitate this. Information needs to be effectively disseminated from the group, to effect change and to inform stakeholders. The Biodiversity Action Plan should also have an information gathering role in relation to risks, impacts and vulnerability of groups (species and habitats). It should assess new information and research, and instigate research when needed to fill in knowledge gaps. It should also have a role in monitoring old and new substances if they are identified as of high risk to biodiversity.

Q3: What are your views on introducing a pesticide reduction target in the UK?

We think that pesticide reduction targets are an important part of reducing impacts of existing harmful pesticides that won't make it through the next stage of chemical reviews. This will allow a gradual phase out and help to instigate substitution to less harmful control methods/chemicals. This should be a means of highlighting and dealing with pesticides of concern, which may have local impacts in the UK. Chemicals highlighted as of concern should be investigated and either researched or reduction targets implemented. These may be chemicals with suggested impacts that weren't apparent during the approvals process i.e. new impacts, as the approval process is not infallible.

Questions on Article 5 training and certification requirements

Q4: What is your preferred approach and why?

The preferred approach is Option 3 making it a statutory requirement for initial and ongoing training, the removal of 'grandfather rights', withdrawal of certification due to a penalty or conviction and the accreditation of training bodies. This is our preferred option as it would ensure that consistent regulated standards are achieved across the board, which is essential for reducing risks to biodiversity. Currently different sectors are at different stages with their training. For example voluntary training in the agriculture sector is already very effective, whereas voluntary training in the amenity sector is poor. Therefore, regulation is needed to ensure that training is brought up to a consistent standard in deficient sectors. When certification is withdrawn due to a conviction or penalty there should be a requirement to retake training at the end of the suspension in order to ensure high standards.

Q5: What type of training and assessment requirement would be appropriate for those spray operators with "grandfather rights"?

Assessments for grandfather right holders should be the same as everyone else, although they should have the option to take the assessments without the training. However, if they do need to undergo training, the training should also be the same. These standards should be the same in order to maintain high standards across the board.

Q6: Do you support the extension of the training and certification requirements (both initial and additional) for professional users and distributors to advisors?

The extension of the training and certification requirements is a good thing as more informed users will result in improved application and use of pesticides. We would also like to see a syllabus setting process that is transparent and overseen by a designated body. Training should be tailored to each sector – agriculture, amenity etc. and also the groups within the sectors such as advisors, professional users, distributors etc. Currently biodiversity impacts are not explained in the existing basic training, and therefore we would like to see a new section on these included in the training. We would also like to see a more general emphasis in all training, on both minimising biodiversity impacts and also the use of alternatives, the use of IPM should be a very important section of basic training. Regular reviews of training course syllabus would need to take place (every 3 years would be recommended). It needs to be recognised that training for distributors has to be very comprehensive as they need to be able to pass clear detailed information onto customers, including information on a range of products, hazards, handling, disposal and alternatives.

Q7: Are there particular offences that you think should automatically incur the withdrawal of a certificate?

Negligent pesticide use that results in an environmental or human health incident should automatically lead to the withdrawal of certification.

Questions on Article 6 sales requirements

Q8: What is your preferred approach and why?

The preferred option is Option 3 but with an attempt to remove unnecessary paper requirements, although information leaflets will clearly be needed in some circumstances. We feel that controls on sales are important for ensuring best practice use of pesticides. The general public aren't given enough information and it is not easily accessible e.g. very few people are likely to find the information on the CRD website. Before the actual point of sale the public should be given leaflets on hazards and alternatives for specific product types, particularly on their impacts and suggested alternatives, and also clearer information should be provided on storage and disposal. These leaflets should also guide customers through a basic IPM process. In conjunction with leaflets, posters should be on display near products detailing hazards and give information on alternatives, and other sources of information. If this was a voluntary option it is unlikely it would happen, particularly

in the case of none specialist distributors. We would also want to see better information available on the product label with regards hazards and alternatives – also information on disposal and storage printed more clearly. Print font size should be a consideration, particularly with an aging population. There should be a ban on sales special offers for all pesticides as this can lead to stock piling and result in increased levels of out of date products, which will need to be disposed of and so worsen current disposal issues.

Q9: Do you think that micro-distributors meeting the requirements described in Article 6(1) should be exempted from the requirement to have sufficient certificated staff present at the time of sale?

Micro-distributors should not be exempt from the requirements to have sufficiently trained and certified staff, as this would undermine the system. As an alternative, there should be graded training relevant to the different types/toxicity of product sold by distributors. Therefore traders selling only low level toxicity products would require an appropriate lower level of training than those selling more toxic products, but nevertheless this should be standardised throughout.

Q10: Do you have any comments on the system proposed for restricting the sales of pesticides for professional use to qualified users?

Sales of certain pesticides should only be to certified users and buyers should be not allowed to pass products on to another user regardless of whether they were certified or not.

Questions on Article 7 information and awareness-raising

Q11: Do you think that more information should be provided to the general public on the risks and potential effects of pesticides? What information would be useful and how should it be provided?

Access to information is essential to allow the public to make more informed decisions regarding their pesticide use, and knowing the risks of exposure to harmful products is a crucial element for such decision making. Previous attempts will have only had a limited reach. This is because such information needs to be not just available but actually provided to all pesticide users and those exposed to harmful products. Information should be provided on the risks of pesticides to health and the environment, in particular in reference to;

- hazards (including risks to biodiversity)
- alternatives
- appropriate storage and handling of products
- appropriate means of application, including rates, favourable conditions for application
- safe disposal

This information should be provided in a number of different forms. There are currently multiple websites on pesticides which are effective at providing particularly detailed information, but an official web-site covering these topics is needed, which

should also include a list of recommended useful web-sites with summary of their contents. In addition to websites, the public should be targeted at the point of sale through i) leaflets which are offered prior to the actual sales transaction, ii) posters near the products and iii) labeling on the product. All of these points of contact can guide the consumer to the website for more detailed information.

With regards pesticide use in public spaces, clear information and notices detailing the types of chemical being used and timings of application in a specific area should be on display.

We feel that the costs of providing this information would be out-weighed by the cost savings due to a reduction of inappropriate and badly undertaken pesticide use, and reduced exposures. For example, such cost savings could include less water pollution incidents due to inappropriate disposal down the drain. The chemical industry directly profit from pesticide use and therefore should be required to contribute towards the associated costs of information delivery and also fund work towards both reducing impacts and promoting best practice through grants and partnership work.

Q12: Can you suggest any improvements to the information gathering systems used by government?

This question is not relevant to the biodiversity focus of this response.

Questions on Article 8 equipment testing

Q13: What is your preferred approach and why?

Option 2 is our preferred option, testing once every five years 2015-2020, and then every three year after that. This option ensures that existing gaps are removed such as the few farmers that are not involved in the Voluntary Initiative (VI) and also other sector members that are not involved in any kind of voluntary schemes. Also, further measures may be needed in sectors where equipment testing is very poor. For example, an incentivised annual voluntary scheme and regulatory provisions would help to close the very large gap that currently exists in the amenity sector. Testing should also occur in conjunction with the VI and so maintaining the existing annual voluntary tests. We would like to see annual testing across all sectors – and ideally this would be voluntary. However, there should be a reassessment of annual voluntary measures in the future and if these aren't successful there should be a move towards option 3 and ensuring annual testing through additional regulatory measures.

Q14: Do you think a derogation from inspection should be allowed for handheld equipment and knapsacks, or, if not, should a different timetable for inspection be applied to these equipment types?

Derogations should be allowed for knapsacks because to enforce inspections would be too costly in relation to the value of the knapsack sprayer and would increase the risk that users would just buy a new knapsack sprayer which would lead to waste of equipment. It is also apparent that knapsack sprayers result in very precise application of chemical product and therefore should be encouraged, and inspections would likely act as a disincentive to their use. However, to accommodate this lack of inspection knapsacks should be subject to strict production standards and require five year servicing.

Q15: Are there any specific types of pesticide application equipment that you think should be exempted from inspection requirements? These could include: pesticide application equipment not used for spraying pesticides (such as granular applicators or equipment for treating seeds) or equipment that represents a very low scale of use.

There are no other pieces of application equipment we feel should be exempt from testing, we think all other equipment should adhere to the testing outlined in Option 2.

Q16: Who do you think should deliver the inspection scheme and why?

The Accredited National Sprayer Testing Scheme which undertakes the voluntary inspection should deliver the scheme. The regular statutory inspections should be instead of the voluntary inspections in relevant years.

Questions on Article 9 aerial applications

Q17: What is your preferred approach and why?

Either Option 1 or 2 with consent-based approaches are the preferred options. Aerial spraying should also be required to use a GPS to allow accurate and targeted application.

Questions on Article 11 water protection

Q18: What is your preferred approach and why?

A mixture of options 2/3 are preferred with both compulsory and voluntary options. The needs of the Water Framework Directive (WFD) and other directives (e.g. Habitats Directive) could be catered for by compulsory options, whereas voluntary options could be adopted more generally for water resource protection. For example statutory safeguard zones could be implemented in vulnerable catchments or in catchment where a specific problem has been identified. These safeguard zones should preferably cover the entire catchments in order to be effective. Voluntary actions alone would not be enough for WFD compliance, because other voluntary initiatives such as catchment sensitive farming, have shown that stakeholders in

target areas are not aware of the voluntary measures, despite the considerable efforts made to appraise them. With the tight timeframe in WFD, there is no room for unsuccessful initiatives and therefore compulsory approaches would ensure fast and effective progress. Catchments containing aquatic Special Areas of Conservation (SAC) and SSSIs are vulnerable to pollution as the boundaries of these protected areas often do not include the surrounding catchment and so are vulnerable to pollution from beyond their boundaries. Therefore depending on vulnerability of the protected area, safeguard zones or no spray zones should be implemented to ensure special protection of these sites. For example, protected species such as White-clawed crayfish are vulnerable to pesticide pollution and therefore provision would be made within its SAC catchments to prevent pollution.

In vulnerable catchments, each catchment has unique conditions in relation to environmental attributes and therefore mitigation needs to be defined in relation to these. Catchment modeling could be used to better understand the pathways of pesticides within a catchment allowing more targeted approaches to mitigation. In catchments with lower pesticide pollution voluntary measures could be applied to ensure that limited impacts are reduced further. Efforts should also be made to work in with agri-environment schemes which have water resource protections options embedded within them.

Water protection and pesticides is an area that still needs considerable research and development, particularly in relation to pesticide pathways in catchments. There is also a need for further research on buffer zones, considering their specific attributes and effectiveness for preventing pesticide transfer. Effective low drift and other improved sprayer technology also require development to reduce the need for spray drift buffers.

The amenity sector has a very different relationship with water pathways because transfer of chemicals on hard surfaces is likely to lead to greater contamination. Therefore, more stringent regulations are required on amenity use. In addition, to protect the aquatic environment there should be a ban on blanket spraying on hard surfaces, as this leads to a high level of run off and regular contamination of water habitats.

Q19: Do you think that government should create a power to establish safeguard zones as envisaged in this Directive, to restrict/prohibit pesticide applications? Or do you think it would be preferable to impose no-spray zones as a restriction on all pesticide products? (except those specifically approved for use on river banks or in water)

A combination of different methods, including statutory safeguard zones which would be both easy to implement and also to regulate, allowing WFD compliance are needed. Complex pesticide pathway issues also need to be able to be taken into account. Therefore, we support the option of creating a new power to establish safeguard zones. We would also want to see no-spray zones applied for products that are high risk to the water environment e.g.: Cypermethrin.

Q20: Do you support the development of the regulatory risk assessment process with a view to moving towards a system of, for example, 'catchment-based' approvals and/or including consideration of use of application technology?

Catchment based approvals would be useful particularly in catchments that are vulnerable or are currently failing to meet requirements of the WFD due to pesticides. These approvals would need to be supported by a stringent catchment assessment method which should be underpinned by science. The use of pesticide catchment pathway models would help to define the risks in each catchment – these risks would then lead to a specific set of predefined and adaptable actions necessary to eliminate these risks. These catchment assessments would be complex and costly and so this measure would need to be adequately resourced in order to be effective. It is recommended that a cost-benefit analysis was conducted prior to implementation of catchment approvals to ensure the system used was the most effective.

Questions on Article 12 relating to protection of specific areas

Q21: What is your preferred approach and why?

Options 2 is our preferred approach but it must result in stringent IPM based risk assessment to ensure that alternative techniques, selection of substances with the lowest risk factor either for the key environmental feature of the site or people and the least risky application method have been considered. We acknowledge that pesticides can be an important conservation management tool, for example for controlling invasive species and that some protected sites are subject to normal agricultural management (for example, SSSIs notified for Stone Curlew). On these protected sites pesticide use is governed by existing SSSI 'operations requiring consent' controls applied to land under SSSI designation. However, we would like to see the list of conservation areas expanded and consent to include: Local Nature Reserves, National Parks and also local and regional wildlife sites. Also, buffer zones around vulnerable conservation areas (identified as having vulnerable species or habitats) should be required to have an appropriate safeguard zone in relation to that risk.

Particularly vulnerable areas are aquatic SACs and SSSIs as boundaries often don't take in the catchment surrounding these sites. Therefore, safeguard zones or buffer zones should be implemented to ensure protection of these sites. As noted above, for example, protected species such as White-clawed crayfish are vulnerable to pesticide pollution in the catchment of the river Eden, a SAC for White-clawed crayfish, and therefore should have safeguard zones/buffer zones to ensure its protection.

We would also like this option to go further and provide protection to vulnerable species and habitats not in 'conservation areas' through buffer zones or other mitigation measures. This would be based on the outcomes of the BAP work being undertaken by the Pesticide Action Plan Biodiversity Group.

Q22: Do you think it is appropriate to prohibit the use of pesticides in public spaces or conservation areas? If yes, what alternative approaches to disease and weed management would you propose in those areas?

Not in conservation areas, because as outlined above, pesticides can be an important conservation management tool and some protected sites are subject to normal agricultural management, so prohibition would not be appropriate. However, use on these sites should be based on stringent IPM based risk assessment to ensure that alternative techniques, selection of substances with the lowest risk factor either for the key environmental feature of the site or people and the least risky application method have been considered.

Questions on Article 13 storage, handling and waste

Q23: What is your preferred approach and why?

Option 3 is the preferred option as statutory controls are needed because some pollution incidents are as a result of poor disposal and use of pesticides, resulting from both professional and amateur users. Although option 3 is preferred, there still needs to be further action and regulation to reduce the pollution caused by these issues. There needs to be recycling schemes or take-back schemes to allow effective disposal of unwanted chemicals and containers. There also needs to be more appropriate packaging and products for amateur users to reduce risk of inappropriate use and spillages. Container design needs to be standardised and strict container design regulations to ensure that the most effective design is used to reduce waste and spillage. For example container size is important, to ensure that the user does not have to buy more than they require leading to unnecessary waste. Training schemes should also include storage, handling and disposal training to ensure that best practice is continually practiced.

Q24: Do you think that take-back schemes or amnesties are an effective way of addressing the risks associated with old pesticide products/packaging that may remain in stores? Can you suggest any other suitable schemes?

Take-back and amnesties are certainly useful and work to a point, but there needs to be the constantly available option and means for safe pesticide disposal. Therefore, we would like to see recycling provisions permanently in place for containers throughout the UK and at the very least amateur disposal /take-back schemes provided by all local authorities.

Q25: Do you think that storekeepers should have a legal obligation to comply with standards for store design, or is it preferable to set guidelines?

This question is not relevant to the biodiversity focus of this response.

Questions on Article 14 IPM

Q26: In which areas do you think pesticide users would benefit from more information/advice, to help them adopt integrated approaches?

Option 3. With the current lack of clarity regarding what IPM is, and a wide variation in its implementation, we feel a statutory standard would be essential to ensure that IPM was practiced across the board and standards were maintained. IPM should work towards minimising pesticide impacts by developing a system that allows users to make informed and educated choices to ensure minimal pesticide use and increased use of low risk alternatives. IPM should be a priority in training and should not simply mean following the instructions on how to use a pesticide product safely. Unfortunately, there is currently a tendency to believe that IPM is already widely used and fully covered for the agricultural sector. However, Rural Economy and Land Use (RELU) programme research has shown that arable farmers are actually only using some of a wide range of IPM methods and that most could do a lot better particularly in relation to encouraging beneficial organisms. Some sectors are further ahead than others in the incorporation of IPM into their best practice for pesticides and therefore each sector will need a different level of work. Each different sector, including agriculture, amenity and non-professionals, needs a set of IPM protocols to be developed. Currently information provided to users on IPM is too technical and more time needs to be spent gathering knowledge and converting information into a usable form. It would be helpful to have a National Action Plan on IPM to help drive this area of work forward and a lot of work is needed to get IPM implemented across all pesticide users in the UK. There also needs to be more research on IPM and also knowledge drawn from the organic sector which has developed a range of IPM relevant techniques.

Q27: Do you have any thoughts on what type of written evidence/record could be provided by pesticide users (of any sector) to demonstrate compliance with IPM principles?

Written evidence and records could take the form of a voluntary record – with users detailing in a journal all of the following: pest problems, any IPM approach taken, and pesticides used. These records could then be subject to random survey and monitoring, and assessed against individual pesticide purchases using the certification process. This process would be similar to the CFE voluntary initiative and monitoring.

Questions on Article 15 indicators

Q28: What is your preferred approach and why?

Option 3. We would like to see the development of an additional biodiversity indicator to supplement the farmland bird indicator. The farmland bird indicator only provides a very limited picture in relation to the impact of the pesticides on biodiversity as a whole. The artificial means of supporting farmland birds distorts the value of this indicator at reflecting the health of species groups further down the food chain. Ideally, indicators should be developed focusing directly on a vulnerable

species group such as moths, butterflies, bees or a plant group. However, with no appropriate monitoring currently in place for these groups, their use as an indicator has not been possible. The use of the 'Chick food index' as an indicator is being explored, but ideally it should be considered as one tool among a range of other options. Newly developed biodiversity indicators would need to have their costs recovered and so full cost recovery would be necessary. The use of models to assess the biodiversity impact of pesticides would be supported; as the number of indicators is limited, modeling would provide a greater understanding of impacts.

Questions for spray notification and records disclosure:

Q29: What is your preferred approach and why?

Option 3 is the preferred approach, this option is relevant to biodiversity as managers of local nature sites or people with biodiversity in their own back gardens should have the right to know the pesticides and spray times of adjacent land. This will help people to mitigate against any potential impacts and to better understand pesticide issues in their local area.

Q30-40 were deemed not to be relevant to biodiversity

This response is not confidential.

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