

# Pesticide Exposures for People in Agricultural Areas



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[www.pesticidescampaign.co.uk](http://www.pesticidescampaign.co.uk)

# Pesticide Hazards

- Pesticides deliberately designed to be toxic - inherently hazardous to human health

## Examples of Safety Data Sheet warnings:

- *Very toxic by inhalation; Do not breathe spray;*
- *Do not breathe fumes; Do not breathe vapour;*
- *Risk of serious damage to eyes; Harmful, possible risk of irreversible effects through inhalation;*
- *May be fatal if inhaled*
  
- Over 50 years of scientific/medical evidence of dangers of pesticides/risks inherent in use/acute + chronic long-term effects that can result following exposure – Reports have recommended “*Avoid inhaling particles of any pesticide*” which is impossible in the situation residents are living in

# Pesticide Exposures for Residents Including Vulnerable Groups

- **Rural residents are a group with one of the highest levels of exposure to pesticides**
- Residents + communities are exposed on a long-term basis to mixtures (or *cocktails*) of pesticides, repeatedly sprayed, in their locality, throughout every year, **and in many cases for decades**
- Residents living near pesticide sprayed fields will include vulnerable groups, such as babies, children, pregnant women, (along with embryos and foetuses), the elderly, people who are already ill and who may be taking medication, amongst other vulnerable groups where the health risks are increased









# **Mismatch/inconsistencies between legislative requirement to protect workers and no protection for residents and communities**

- **Worker**
  - Legally allowed to know info. on chemicals/risks/effects
  - Required to wear PPE to protect against droplets/particles/vapours/dusts etc.
- **Residents/communities**
  - Currently not entitled to know info. on chemicals/risks/effects
  - No protection and yet breathing same droplets/particles/vapours/dusts etc.



# Pesticides in the Air

- Reputable Californian study – found pesticides located up to 3 miles away from treated areas – calculated health risks for residents + communities within those distances
- One study of Californian women showed that living within a mile of farms where certain pesticides are sprayed, during critical weeks in pregnancy, increased by 120% the chance of losing the baby through birth defects
- Another study showed living within a mile and a half of the cranberry fields of Cape Cod increased a child's risk of developing a particular type of brain tumour
- Study published in JAMA that confirmed acute illnesses in children + employees from pesticides sprayed on farmland near schools pointed out that 7 US states require no-spray zones of up to 2.5 miles around schools

# Multiple Exposure Scenarios

- **Residents can have more than one exposure scenario**
- Eg. A young child may live next to, + also attend school next to regularly sprayed fields (and may have done for many years if they also attended nursery + infant schools near sprayed fields as well) – **This could result in an even higher level of exposure + children are particularly vulnerable to effects of pesticides because their bodies cannot efficiently detoxify chemicals, as organs are still growing + developing. Also when children are exposed at such a young age they will obviously have a longer lifetime to develop long-term effects after any exposure**
- Another eg. is if someone lives near sprayed fields + works in a different location, also situated near sprayed fields, such as people working in offices, hospitals or other buildings
- **These are all realistic long-term multiple exposure scenarios that need to be considered**





# Ill-health Reported by Residents

## Acute

- Sore throats, burning eyes, nose, skin, blisters, headaches, dizziness, nausea, stomach pains, flu-type illnesses etc.

## Chronic

- Cancers (including breast, prostate, stomach, bowel, brain, + skin), leukaemia, non-Hodgkins lymphoma, neurological conditions, (including Parkinson's disease, Multiple Sclerosis (MS) + ME) asthma, allergies, amongst others
- Reports of this nature have gone on for decades + **many are related to young children.** (Also reports of effects in dogs and other domesticated animals as well)

# Recognition of Chronic Effects in EU

- EU Thematic Strategy addresses the risks to both human health + the environment
- European Commission has clearly acknowledged the long-term impacts of pesticides for those exposed over the long-term including for those living in the locality to sprayed fields
- Eg. Q&A for EU Thematic Strategy states, "***Long term exposure to pesticides can lead to serious disturbances to the immune system, sexual disorders, cancers, sterility, birth defects, damage to the nervous system and genetic damage.***"

# Recognition of Chronic Effects in EU

- Page 23 of the Impact Assessment for the Thematic Strategy highlights **both the acute + chronic effects** in more detail. One paragraph states:-

*“There are various sources for continuous exposure, like the consumption of polluted water, pesticide residues in food, regular application of PPP [Plant Protection Products] over many years, or residential proximity to it and consequently direct exposure via air. People regularly or repeatedly exposed to or working with pesticides, may have a higher risk of incidence of cancer or other chronic diseases, birth defects, cancer in offspring, stillbirths and reproductive problems, skin rashes and disorders, disturbed enzyme and nervous system.”*

Source: [http://ec.europa.eu/environment/ppps/pdf/sec\\_2006\\_0894.pdf](http://ec.europa.eu/environment/ppps/pdf/sec_2006_0894.pdf)

# External Costs of Pesticide Use

- Cost/benefit analysis of pesticides is incomplete + therefore invalid, as the full external costs of pesticide use have not been calculated, particularly re. the health + environmental impacts on rural residents/communities
- Therefore it is not known what proportion of the overall costs from damage to health + the environment could be attributable to pesticides – **However, even if only partly, then the cost to the economy + society, as a whole, is clearly substantial**
- **Personal + human costs to those suffering chronic diseases cannot be calculated in financial terms – significance of consequences requires adoption of a preventative approach especially in relation to protection of children + other vulnerable groups**

# European Proposals on Pesticides

- EU proposals present a **unique** opportunity to provide a **high level of protection** for EU citizens, their families + the environment. It **could** ensure that **preventative action** is the underlying principle for the protection of human health + environment. However, the current proposals show considerable shortcomings

# Protecting Public Health from Pesticides

- **Article 11 of the Framework Directive** proposes that the use of pesticides shall be prohibited or severely restricted in areas used by the general public, as it acknowledges that the risks to the general public in these areas are high, but then only lists some areas where these restrictions should apply
- If it is recognised as dangerous to a member of the public in one situation then it should apply to any situation where the public may be exposed, in particular if they are at risk of repeated + long-term exposures such as people living near, going to school near, or working near pesticide treated areas

# Protecting Public Health from Pesticides

- Considering the distances pesticides have been shown to travel then small buffer zones or **“strips”** would be **completely inadequate** + therefore **substantial** legislative measures must be introduced to prevent public exposure to pesticides, especially for the protection of children + other vulnerable groups
- The use of pesticides should be prohibited in a zone of **at least** 1500 metres in **all** areas used by the general public or by sensitive population, such as residential areas, parks, public gardens, sports grounds, school grounds, children’s playgrounds + hospitals etc. **In all these areas non-chemical alternatives should be used**

# What Needs to be Done

- Protection of public health is supposed to be the number one priority of pesticide policy + take absolute precedence over any financial, economic or other considerations
- Only real solution to **eliminate** adverse impacts of pesticides is to take a preventative approach with widespread adoption of **truly sustainable** non-chemical + natural methods of pest management to protect not only public health, but animals, wildlife, air, water, soil, food + the wider environment
- The new EU proposals on pesticides clearly acknowledge both the acute + chronic long-term impacts of pesticides on human health, + **if strengthened**, could result in very necessary + long overdue legislative measures for a high level of protection of EU citizens + the environment
- **Not merely about reducing pesticide exposure + impacts for vulnerable groups, or substituting one chemical for another, but eliminating pesticide exposure + impacts altogether**

# Further Information

For further information on the  
UK Pesticides Campaign see:-

[www.pesticidescampaign.co.uk](http://www.pesticidescampaign.co.uk)

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