

Sick of pesticides

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An estimated 26 million Europeans are diagnosed with cancer each year. A recent Impact Assessment commissioned by the European Parliament estimates that one percent – annually 26 000 cases – could be attributed to pesticides in our environment. And for some cancers this percentage could be even higher. Pesticides are also a leading culprit in other diseases including Parkinson's disease. The association is so common that Parkinson's

disease is now recognized as an occupational disease by a French health insurance agency.

Fortunately, many pesticides are non-essential components of our current farming practices and food production schemes. Alternatives to the implicated chemicals do exist. European Parliamentarians voted on 13 January, 2009 to tighten rules on pesticides and phase-out those associated with cancer,

reproductive problems and other health disorders. The newly approved European Union pesticides reform also includes a severe restriction of pesticide use in public areas.

More than 50% of food products in Europe contain pesticide residues



The Health & Environment Alliance (HEAL), an international non-governmental organization based in Brussels, has launched a *Sick of Pesticides* campaign Europe-wide to raise awareness for pesticide hazards and the action needed at national level to safeguard health. It aims to involve both health professionals and the wider health community in the pesticides debate. It focuses on pesticides reform as an opportunity to achieve healthier food supplies, safer occupational health and protected public places, particularly for children.

Healthier food supply

Currently, more than 50% of food products in Europe contain pesticide residues, and 5% of these residues exceed the acceptable safe limit. As a result, children eating a conventional diet are found to have pesticides in their bodies exceeding acceptable levels. Pesticides can accumulate in our bodies over time and act in concert with other chemicals or conditions to play a role in many diseases. The ingredients of some pesticides can mimic the hormones in our bodies that naturally signal human development, such as the onset of puberty. These *endocrine disruptors* hijack

our internal regulatory systems, disrupt normal development and reproductive process and may produce related cancers. Children's and pregnant women's exposure to pesticides has been positively associated with cancers both in childhood and in adult life.

The new EU pesticides legislation includes a ban on pesticides that are known to cause cancer, genetic mutations or to be toxic to reproduction. By removing these harmful chemicals from food production, one common route of human exposure is eliminated.

Safer occupational health

Much of Europe's landscape is dominated by agriculture. As a result, many Europeans live and work in close proximity to farms or agro-industrial developments placing these people in routine contact with pesticides. Numerous epidemiological studies show that farmers, agricultural workers and their children are at higher risk of incurring health problems due to long-term exposure to pesticides. These health problems include leukaemia, multiple myeloma, brain tumours, prostate cancer and impaired immune system function.

Up to one in six children grow up with a developmental disorder that can be attributed to industrial chemicals

A number of studies have found the risk of childhood cancers to be higher among the children of workers in agriculture and children living on farms, with a strong association for childhood brain tumours. Moreover, studies of children diagnosed with autism found a significant association between their mother's residential distance from sites of agricultural pesticide application and the stage of gestation at the time of pesticide use.

The new EU pesticide legislation prohibits aerial crop-spraying except in exceptional circumstances and thereby has the potential to protect both farm workers and nearby residents, if applied correctly at national level. The EU phase-out of dangerous pesticides means that agricultural workers and pesticide producers across Europe reduce their contact with toxic substances on the job, and thus, their exposure.



European Union



500 000 000
inhabitants



\$ 29 900
income per year



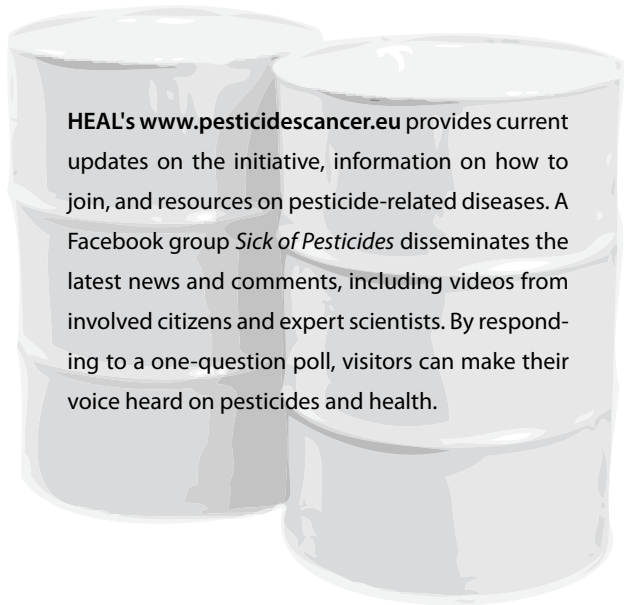
♂ 75yrs ♀ 81yrs
life expectancy



9.2%
of GDP for health



3.18
doctors/1000 people



HEAL's www.pesticidescancer.eu provides current updates on the initiative, information on how to join, and resources on pesticide-related diseases. A Facebook group *Sick of Pesticides* disseminates the latest news and comments, including videos from involved citizens and expert scientists. By responding to a one-question poll, visitors can make their voice heard on pesticides and health.

Protected public spaces

The European public is in close, daily contact with pesticide-laden public spaces. Cosmetic pesticides sprayed in our community green spaces contaminate the areas where children spend most of their time: parks, playgrounds and schools. Pesticide insults can be particularly dangerous to the developing brain during foetal development and early childhood. Up to one in six children grow up with a developmental disorder, including learning disabilities, attention deficit disorder and mental retardation, that can be attributed to exposure to industrial chemicals, including some pesticides.

With new pesticide rules in place, pesticide use near schools, parks or hospitals would be banned or restricted. Public spaces would

be free from toxic contaminants and safe for young and old community members alike.

HEAL

To bring this legislation into practice, the 27 member states of the European Union will have to develop National Action Plans for reduction in using pesticides in consultation with stakeholders. HEAL will work to encourage the participation of the health community in order to realize the goals of the European pesticides policy. The HEAL *Sick of Pesticides* campaign aims to achieve an informal network of people and groups who are concerned and ready to act to reduce the impact pesticides have on cancer incidence.

Conclusion

In view of growing evidence identifying pesticides' dangers, the European Parliament demonstrated its support for tighter legislation on pesticides. If the new legislation is implemented correctly, Europeans can enjoy a healthier food supply, safer occupational health and protected public spaces thanks

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Hanneke van der Wijngaart, president of the European Medical Students' Association:
 I had no idea about the scale of the problem. The statistics in this article are quite shocking. But as we have seen many times before, a new law does not imply instant change; it requires a lot of effort and goodwill from 27 national governments and millions of individuals!
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to new criteria for the exclusion of the most hazardous pesticides in place. Ultimately, we can look forward to better human health outcomes across all 27 countries in the European Union.

About the author

Katrina is Canadian and came to the Netherlands on a one-year Rotary Ambassadorial Scholarship. During this time, she completed a graduate programme in International Public Health at the VU Amsterdam.

Further reading

- The European Parliament's Committee on Environment, Public Health and Food Safety. Impact Assessment: The benefits of strict cut-off criteria on human health in relation to the proposal for a Regulation concerning plant protection products. 2008.
- Pesticide Action Network Europe. An analysis of the Commission's proposals for 'cut off criteria' and candidates for substitution. 2008.