



**Pesticides
Action
Network**
Europe

PAN Europe Newsletter

Summer/Autumn 2010

News

Progress in consumer protection: Maximum pesticide residues lowered throughout Europe

From 7 June this year, the permitted maximum residue levels (MRLs) for 11 pesticides present in a wide range of food products will be tightened. Following years of struggling with European Union (EU) authorities, this result marks an important step towards better consumer protection.

It has been a long struggle. Since 2005 a European regulation has governed harmonisation of EU MRLs for pesticides in food. PAN Germany and Greenpeace successfully proved that producers who met these maximum levels could not guarantee that consumers, especially children, were free from acute health risks. For example, grapes were previously permitted to contain up to 5 mg/kg of the pesticide procymidone, which is known to have effects which can harm the reproductive organs. But this limit exceeded the acceptable risk level 30-fold.

The European Food Safety Authority (EFSA) ultimately admitted that many MRLs justify health concerns. As a

result, it was decided that these MRLs should be slashed under a new regulation. For procymidone residues in food, only 0.02mg/kg will be permitted.

Carina Weber, PAN Germany's executive feels it was important that the correction of MRLs took place. "But," she says, "it came years too late. Many fruit and vegetables with excessive residues have already been eaten." Manfred Santen, a pesticide expert from Greenpeace, which joined PAN Germany in this campaign, said he appreciated the MRL reduction, but stressed that it was only an initial step in the right direction because the new regulation covers only a small portion of the critical laws. In a study from 2008, Greenpeace and Global 2000 proved that many MRLs defined by the European Commission must be considered as "not safe".

An further problem is possible combination effects between active components of pesticides (the 'cocktail effect'), which has so far not been

considered when defining MRLs. As long ago as 2005, PAN Germany and Greenpeace drew attention to this problem.



The MRLs for pesticides in grapes have been lowered

How can we manage with fewer pesticides?

This spring, PAN Europe lent its support to the fifth annual 'Alternatives to Pesticides Week'. The initiative, launched in 2006 by French environmental groups including our partner MDRGF (Movement for the Rights and Respect for Future Generations), the Week has become an iconic event which focuses pressure on decision-makers and demonstrates that we can and must find ways to do without pesticides on farms, and in our gardens or homes.

Over the five short years of its existence, the Alternatives to Pesticides Week has dramatically expanded considerably, with no fewer than 35,000 participants in 2010 (a 75% increase over 2007). There has been strong media coverage with some hundred printed articles, radio and TV interviews. Throughout Europe, hundreds of associations, communities, businesses and other bodies held lectures, debates, exhibitions, film screenings,



performances and tours of gardens and farms, to raise awareness of the dangers inherent in pesticide use. François Veillerette, MDRGF's director, says: "This widely-supported campaign has been a great success, with public support expanding with each passing year, driving home the need for us to avoid using chemical pesticides wherever possible."

In Brussels, PAN Europe marked Alternatives to Pesticides week with a

series of events in association with the European Economic and Social Committee and MDRGF on 25 March. A debate was followed by a reception to launch a week-long exhibition of posters exploring the theme of integrated production, and a competition to find Europe's most bee-friendly farmer. For further details of our poster exhibition, see: www.pan-europe.info/Bee_friendly_competition.html

Elsewhere in Europe events were held in France, Austria, Germany, Hungary, Germany, Luxembourg, Macedonia and Spain. Several African countries also participated, including Mali, Mauritania, Togo and Tunisia. But the campaign is in no danger of becoming complacent about its impact. François comments that "in future years, we really want to develop the campaign in Africa and Europe."

'Sick of pesticides' campaign to expand in Europe

The Health and Environment Alliance (HEAL) is running successful activities in France and Britain as part of its 'Sick of Pesticides' campaign. Three new countries will join soon

Paul François is front-page news in *La Vie*, a leading French magazine. He is one of 40 farmers and 'bystanders' affected by pesticide exposure who have formed a network. At their first meeting in January, recurrent themes included: the desire to support each other with legal cases; to break the silence about the health effects of pesticides, and working for better protection against harmful pesticides in France. Paul François's testimony can be heard at www.victimes-pesticides.org.

Many French network members have since appeared in the news. The

phones are constantly ringing in the office of MDRGF, the French NGO which serves as the network's secretariat, and is also HEAL's partner in the 'Sick of Pesticides' campaign.

In Britain, the Sick of Pesticides campaign works with PAN UK. A survey there reveals that schoolchildren may be exposed to at least four potentially cancer-causing pesticides. The Government has recently launched consultations on its national plan for pesticide use. The survey underlines the need for a ban on hazardous pesticide use in schools.

The health impacts of pesticides and biocides, particularly among vulnerable groups like children, reinforce the need to translate the European Union's 'pesticides package' into action at national level. As countries develop their national action plans on

pesticides, HEAL aims to highlight the adverse health effects of pesticides through activities in the Sick of Pesticides campaign. Groups across the EU will share experiences and educational, advocacy and legal tools to help local groups, schools and farmers become involved in improvements to national policy. HEAL is calling for pesticide-free areas and the immediate phase-out of the most harmful pesticides.

The Sick of Pesticides campaign will soon be extended to Belgium, the Netherlands and Hungary. For information see HEAL's Pesticides and Health E-news: www.env-health.org/IMG/pdf/Pesticides_and_health_ene_ws_-_February_2010.pdf. If you are interested in working with HEAL on this campaign, please contact: anne@env-health.org.

Bluetongue blues

Bluetongue is a viral disease transmitted by midges¹ which affects ruminants such as cattle and sheep. It often betrays no symptoms among infected animals, but can harm their mucosa (the moist tissues which line their organs and body cavities). In 2000, the European Council published a directive (2000/75/EC) which authorised measures to fight bluetongue at EU level. Among the measures the directive recommends regular treatment of animals, the buildings where they are kept, and their surroundings². The products most frequently sprayed contain active substances like permethrin and deltamethrin, which have a neurotoxic effect on insects. The European Food Safety Authority subsequently claimed that the efficiency of insecticide treatment of animals was of questionable value and that insecticide use in buildings and surroundings was

an ineffective way of eliminating reservoirs of the offending midges^{3,4}. Further legislation relating to bluetongue⁵ already takes these claims into account and avoids the need for chemical measures against vectors of the disease.

However, the latest laws do not contain any specific requirements on abandoning harmful practices or factoring the effects on the environment and non-target species into treatment plans. So, it is up to member states to decide whether or not to use insecticides to fight bluetongue. The application of such treatments in some parts of France is believed to be responsible for large-scale decline in bees populations in those areas. Some 30 professional beekeepers (with over 250 colonies each) lost around 2,500 colonies, costing an estimated €800,000+. Analysis of the affected bees has failed to detect any

specific pathology, but samples have revealed residues of permethrin, bifenthrin and deltamethrin.

While the Directive is reviewed in the framework of the Animal Health Law, the Commission is to be encouraged to advise member states to suppress activities which have proved ineffective against bluetongue.

1. *Culicoides* sp.
2. Article 4 paragraph 2 letter iii
3. Opinion of the Scientific Panel on Animal Health and Welfare (AHAW) on request from the Commission on bluetongue vectors and vaccines. Question number: EFSA-Q-2006-311. 27 April 2007
4. Opinion of the Scientific Panel on Animal Health and Welfare on request from the Commission on bluetongue. Question number: EFSA-Q-2007-201. 19 June 2008
5. Commission Regulation (EC) 1266/2007 and Commission Regulation (EC) 789/2009

MEPs tiptoe towards biocide regulation

The European Parliament in Brussels has recently given environmental NGOs grounds to hope that the European Union will strengthen safeguards which protect our health and the environment from biocides. On 22 June, the Parliament's Environment Committee voted on amendments to the draft report for a biocide regulation by Christa Klass, a parliamentary rapporteur. PAN Germany, PAN Europe and other NGOs gave a cautious welcome to some suggested improvements. But they remain concerned that Members of the European Parliament (MEPs) may negate these efforts by further weakening the authorisation system.

In contrast to the Commission's weak draft biocide regulation, the Environment Committee favoured environmental-related criteria for a cut-off regime similar to the one covering chemicals with bioaccumulative,

persistent and toxic properties (PBT). Substitution plans should ensure the phase-out of the biocides in question. The MEPs also support protecting vulnerable groups and mandatory EU measures for sustainable biocide use. They have also added provisions to evaluate combination effects and nano-biocides.

But NGOs believe the MEPs' additional amendments are poorly balanced. Despite tightening the cut-off regime, the Committee still tolerates vaguely-worded exemptions from the ban on highly hazardous substances and has failed to consider accidents involving carcinogenic, PBT or mutagenic substances. Data requirements have also been further weakened while the time line for evaluating biocide applications has been markedly curtailed. This approach will be combined with EU-wide authorisation of all kinds of biocidal products, leaving

inadequate scope for individual EU countries to impose stricter national standards.

The Committee has also favoured weakening the substitution principle on product level and there has been a major attempt to fall in line with the Commission's labelling standards for biocide-treated articles. The NGOs have urged MEPs to review the outcome on these issues, arguing that a strict cut-off regime should apply for all highly hazardous substances, leaving no ambiguous exemptions. It is also important to provide a clear framework for promoting sound chemical and non-chemical alternatives.

For details on PAN Germany's position, see: www.pan-germany.org/deu/~stellungnahmen.html

For PAN Europe's Press Release see: www.pan-europe.info/News/PR/100621.html

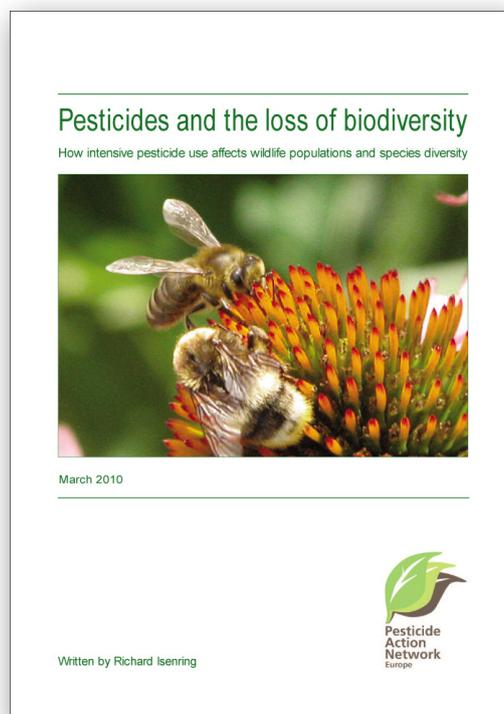
PAN publishes biodiversity-loss review

In the UN's International Year of Biodiversity, PAN Europe has published a review on the impact pesticides are having on biodiversity. The report, entitled 'Pesticides and the loss of biodiversity: How intensive pesticide use affects wildlife populations and species diversity', summarises recent research findings from the scientific literature on the impact of pesticides on biodiversity. It contains specific chapters on birds, bees and butterflies, mammals, plants, amphibians and aquatic species, and soil. The review covers mainly European and North American studies but includes key findings from other continents. The findings are highly relevant among others to promote the meaningful implementation of the Directive 2009/128/EC finalised in October 2009 on Sustainable Use of Pesticides.

Among the report's findings are some dramatic revelations:

- In farmland habitats, population declines have occurred in about half of plants, a third of insects and four-fifths of bird species
- Pesticide dependency and intensity has increased in the last decades. Between 1990 and 2006, the total area treated with pesticides increased by 30% in the UK, and the herbicide-treated area increased by 38%

- How herbicides can cause changes in vegetation and habitat which threaten mammals, while insecticides may reduce the availability of important food insects
- In Western Europe the number of farmland birds is now just half that of 1980, even among formerly abundant species.
- Evidence of bird populations directly affected by poisoning from organophosphate or carbamate insecticides and anticoagulant rodenticides
- Some pesticides are highly toxic to bees, bumblebees and other beneficial insects
- Residues of imidacloprid in maize pollen grown from treated seed can be a high risk to bees
- Insecticides and herbicides in surface waters (from spray-drift or run-off) can alter the species composition of aquatic communities and affect fish and invertebrates further up the food chain



We hope you will find this new research review an informative reference document at this critical opportunity for policy reform to protect the future of our biodiversity. To download the report, please go www.pan-europe.info/Campaigns/biodiversity.html

Training farmers in integrated pest management to reduce pesticide poisoning

The World Health Organization has estimated that there are three million cases of pesticide poisoning globally each year, mostly in the developing world. However, due to under-reporting, the actual number of incidents is likely to be higher. Efforts to reduce exposure and poisoning through the use of personal protective equipment (PPE) have been largely ineffective. The Food and Agriculture Organisation of the United Nations has produced a Code of Conduct on the Distribution and Use of Pesticides. This recommends that acutely toxic pesticides requiring the use of uncomfortable and expensive PPE should not be used in developing countries. Despite this recommendation the number of poisoning incidents remains high.

A new study reports on the effect of training farmers in South India in integrated pest management through Farmer Field Schools (FFSs). Sixty five farmers reported on pesticide use and the signs and symptoms of pesticide poisoning during two growing seasons. In 2003 the farmers used synthetic chemicals while in 2004 they used integrated pest management (IPM) methods following FFS training.

The use of IPM in 2004 reduced the use of pesticides and halved the incidence of pesticide poisoning compared with 2003. The pesticides used in 2004 tended to be less hazardous than those used in 2003. The results of the study indicate that educating farmers in IPM is an effective way to reduce pesticide poisoning incidents in the developing world.

Reducing the Incidence of Acute Pesticide Poisoning by Educating Farmers on Integrated Pest Management in South India, Mancini F, Jiggins JLS, O'Malley M. International Journal of Environmental Health, 15:143-151, 2009.

Pesticide exposure linked to skin cancer

The incidence of cutaneous melanoma, the most deadly form of skin cancer, tripled over the last 30 years in the United States. One of the known risk factors is exposure to the sun. Farmers have an increased risk of developing melanoma and other skin cancers, but it is unclear whether this can be explained by their higher level of exposure to the sun or if other factors are involved.

A new study looks at the relationships between 50 agricultural pesticides and cutaneous melanoma incidence among those enrolled in the Agricultural Health Study cohort of licensed pesticide applicators. The study found significant associations with maneb/mancozeb, parathion, and carbaryl. These results suggest that exposure to some agricultural chemicals may be another risk factor for melanoma.

Pesticide Use and Cutaneous Melanoma in Pesticide Applicators in the Agricultural Health Study, Dennis LK, Lynch CF, Sandler DP and Alavanja MCR, Environmental Health Perspectives, 118(6):812-817, 2010..

Agricultural fungicides may render drugs to treat human infections ineffective

Triazole drugs are used to combat life-threatening infections with *Aspergillus fumigatus* in humans. But in recent years strains of *A. fumigatus* have emerged which are resistant to these drugs. The triazole drugs in question are similar to the azole fungicides used extensively in Europe to protect tree fruit, grapes and grain from fungal attack. A group of Dutch researchers has studied the resistant strains isolated in hospital and suggest that widespread use of these agricultural fungicides has allowed resistance to develop in the human pathogen.

The risk of widespread agricultural use leading to resistance was been debated for some time. In 2002 an expert panel for the European Commission concluded this was unlikely. This new research is likely to reopen the debate.

Azole resistance in Aspergillus fumigatus: a side-effect of environmental fungicide use? Verwiej PE, Snelders E, Kema GHJ, Mellado E and Melchers WJG, The Lancet Infectious Diseases, 9(12):789-795, 2009.
Farm fungicides linked to resistance in a human pathogen, Enserink M, Science, 326:1173, 2009.

Research shows high levels of OP exposure among Egyptian cotton workers

Cotton is a key export crop for Egypt and, although grown on independent farms, the application of pesticides on cotton fields is controlled by the Ministry of Agriculture. This means that the pesticides used, the application equipment and application procedures are standardized across the whole of Egypt.

Cotton production is notorious for its high use of pesticides, particularly the neurotoxic organophosphates (OPs). Two recent studies have shown significant behavioural problems among adult workers in Egyptian cotton production and among adolescent pesticide applicators. Cholinesterase testing indicated that these groups had been exposed to higher levels of organophosphates than control groups.

The authors of this study carried out a detailed study in Menoufia, one of 29 Governates in Egypt. To understand how cotton workers are being exposed they carried out surveys of workers and observed their workplace activities, collected air and biological samples from workers, and applied dermal patches. The dermal patches were used to determine skin exposure on different parts of their body.

The authors showed that the levels of skin exposure to chlorpyrifos were sufficiently high to necessitate urgent changes to working practices among these cotton workers. As cotton production is standardized across the whole of Egypt this is likely to be a widespread problem.

Chlorpyrifos exposures in Egyptian cotton field workers, Farahat FM, Fenske RA, Olson JR, Galvin K, Bonner MR, Rohlman DS, Farahat TM, Lein PJ and Anger WK, Neurotoxicology 31:297-304, 2010.

Prenatal pesticide exposure harms children's behaviour and health

Intensive floriculture is well-known for its high pesticide use and often relies on female labour. Many women employed in the industry continue working during pregnancy and may still be exposed to pesticides during crucial stages of their pregnancy.

A study was carried out in Northern Ecuador in an area of intensive floriculture on 84 children aged 6-8 from the local public school. Their potential exposure to pesticides in utero was assessed by interviewing their mothers. Their current exposure was determined from the presence of organophosphate (OP) metabolites in their urine and the level of cholinesterase activity in their red blood cells (OPs inhibit this).

A range of neurobehavioural tests was carried out on the children to test their motor speed, motor control, visuospatial performance and visual memory. Cardiovascular tests were also performed. Thirty-five of the children were exposed to pesticides during pregnancy through maternal pre-natal exposure and 22 had detectable current exposure.

Children with prenatal exposure through their mother's greenhouse work performed consistently worse on the battery of neurobehavioural tests. This corresponded to a developmental delay of 1.5-2 years. Maternal exposure was also associated with an increase in the children's blood pressure.

Neurobehavioral Deficits and Increased Blood Pressure in School-Age Children Prenatally Exposed to Pesticides, Harari R, Julvez J, Murata K, Barr D, Bellinger DC, Debes F and Grandjean P, Environmental Health Perspectives 118(6):890-896.

Maternal exposure to pesticides in the home during pregnancy is associated with neural tube defects in children

Studies carried out in animals have previously shown a relationship between maternal pesticide exposure and neural tube defects in children (such as, spina bifida). Epidemiological studies have confirmed this relationship between maternal employment in agriculture and neural tube defects. Less is known about household exposure and these defects.

A new study looked at exposure levels of 184 Mexican American women who had either given birth to a child with a neural tube defect or had had a pregnancy terminated due to a neural tube defect. Their exposure was assessed by interviews carried out 5 to 6 weeks post partum and compared to that of 225 women from the same area who had given birth to healthy children over the same period. The interviewed obtained information on a range of topics including any pest control carried out within home, proximity to agricultural land, potential occupational exposures, use of medication and vitamin supplements.

The study revealed that mothers exposed to pesticides during pregnancy are more likely to have a child with a neural tube defect. This association was strongest when the woman was exposed within the home or lived within 0.25 miles of cultivated land, in which case they were twice as likely to have a child with a neural tube defect.

Maternal pesticide exposure and neural tube defects in Mexican Americans, Brender JD, Felkner M, Suarez L, Canfield MA and Henry JP, Annals of Epidemiology, 20(1):16-22.