

The death of strychnine

The EU withdrawal of strychnine marks its end as a method of mole control. While this has got to be applauded there is no guarantee that the main alternative, lethal traps, will be more humane. **Chris Davies** examines the issues and calls on ministers to review laws and draw up new guidance and training.

Few of us will ever see a mole yet many will see the small mounds of earth left as these elusive animals tunnel under the ground catching worms and insects. Some find mole hills unsightly. Others find the tunnels they create damaging to their land and go to great lengths to stop moles. Moles living on grassland such as golf courses or horse gallops are a particular target.

Up to now professional pest controllers have been able to apply for government licences to use strychnine to control moles with 3,000 users currently licensed. But while strychnine is effective it causes a slow and agonizing death, and potentially

puts other animals at risk.

However, change is afoot. European Union (EU) directive 91/414/EEC is midway through an ambitious programme to review all pesticides used within Member States. This requires manufacturers to provide health and safety data to support the continued registration of their products. Strychnine was to be reviewed in the fourth part ('fourth review programme') of this programme but manufacturers have failed to provide such data. Despite last ditch appeals by users, from 1 September 2006 it will no longer be legal to use.

While an end to the use of strychnine is



Chris Davies examining mole hills

Photo: Avril Manderson

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Good news for manufacturers

The US EPA does not require that tests on human subjects be conducted when registering a pesticide. Rather, the rule simply allows the agency to consider studies involving intentional dosing. Most studies done to register a new pesticide are performed or sponsored by the registrant (generally the manufacturer) and registrants generally consider the 'uncertainty factor', applied when extrapolating from animals to humans, to be unnecessarily protective. By performing experiments on humans and submitting them to the USEPA, registrants hope to reduce or eliminate this factor. This would increase the amount considered 'safe' for humans and higher pesticide use rates would be allowed.

Responses

Most people are surprised that under many circumstances intentional human dosing studies are now considered ethical by the US EPA. The Pesticide Action Network, in concert with other environmental health and justice organisations is responding to the new rules in multiple ways. One way is to expose the problems with the US EPA's ethical guidelines when they were being prepared. Now that the rules have been finalized by the Bush administration, there is a judicial review underway. Significant loopholes have been identified⁶.

A complementary approach is to strengthen ethical guidelines used by other regulatory agencies. For example, in the State of California, there is a regulatory process that is independent of the US EPA (this is not the case for most US states). PAN North America is a co-sponsor of legislation designed to prevent intentional dosing involving people from being used in

California's regulatory process.

Ultimately, testing pesticides on people will come to haunt pesticide manufacturers as a public relations problem, much as deliberate attempts to market cigarettes to children now haunts cigarette manufacturers. We can do everyone involved a favour by pursuing all possible mechanisms for strengthening ethical standards for pesticide testing.

References

1. Ross JH, Driver CH, Cochran RC, Thongsinthasak T, Krieger RI, *Could Pesticide Toxicology Studies be More Relevant to Occupational Risk Assessment?*, *Annals of Occupational Hygiene*, 45, S5-S17, 2001, http://annhyg.oxfordjournals.org/cgi/reprint/45/suppl_1/S5.pdf
2. US EPA Data Evaluation Record, TXR#0051475, www.epa.gov/osa/hsrb/files/mitc_der.pdf
3. *Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law No. 10*, Vol. 2, pp. 181-182. Washington, D.C.: U.S. Government Printing Office, 1949, www.nihtraining.com/ohsr/site/guidelines/nuremberg.html
4. US EPA, *Protections for Subjects in Human Research*, www.epa.gov/oppfead1/guidance/human-studies-finalrule.pdf
5. The Bush Administration's announcement of the guidelines highlighted that they were banning consideration of studies involving intentional dosing of pregnant women and children (this aspect of the guideline was specifically required by amendments to budgetary legislation passed in August, 2005).
6. PAN North America, *Groups Sue EPA for Approving Unethical and Illegal Human Pesticide Testing*, 23 February 2006, www.panna.org/resources/newsroom/humanTestingSuit20060223.dv.html
7. European Chemicals Bureau, *Toxicology and Chemical Substances, Annex V (5), Part B, Methods for the determination of toxicity*, <http://ecb.jrc.it/testing-methods/>
8. Letter from Caroline Kennedy, Pesticides Safety Directorate, 25 May 2005.

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welcome one serious concern remains. The main alternatives to poisoning are 'kill traps'. Although well-designed and properly-used traps cause much less suffering than strychnine, many mole-catchers fear an increase in the use of poor quality traps by untrained operators: badly made traps can maim, leaving the mole to slowly bleed to death. If traps are to take over from strychnine the government should ensure they are humane and used by trained catchers.

At present regulations for mole traps are limited. The withdrawal of strychnine should be used as an opportunity to implement new training and guidance that is urgently needed to guarantee humane mole control. The Minister for Rural Affairs should review the laws regulating trapping. A first step towards better practices would be to classify moles as mammals and not vermin. Under current law this would require traps to be checked every 24 hours.

The EU Health Commissioner Markos Kyprianou has refuted claims by some mole-catchers that moles may be a threat to health and says the Commission is not aware of any scientific evidence indicating that the presence of moles in soil poses specific health risks for other animals or humans. In some European countries moles are a protected species.

Moles can actually be gardeners' friends: they eat slugs and many harmful insect larvae such as cockchafer and carrotfly. Their tunnels also help to drain and aerate heavy soils and the fine soil of mole-hills was traditionally for potting compost. Landowners should think twice about extermination. Moles need to be controlled where their presence poses a danger to safety, for example on airstrips or horse gallops. But it is time to realise we cannot simply exterminate a creature because it pushes up a few daisies.

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