The CAP & Pesticides

Pesticides

Pesticides (a term used to cover herbicides, insecticides, nematicides and fungicides) are products designed to kill or repel pests. However, they can also harm people and the environment and strict controls are in place over the sale and use of pesticides in the EU.

Problems still arise from day to day use, overuse (e.g. the use of pesticides as a first resort rather than as part of integrated pest management), misuse (e.g. agricultural pesticides are frequently identified as the cause of illegal poisoning in birds of prey), and unidentified adverse effects (e.g. sub-lethal exposure to the neurotoxin pesticides neonicotinoids can impact on the foraging behaviour of pollinators[1]).

Although usually applied with a particular pest in mind, pesticides can also affect untargeted organisms and have indirect effects on others. The indirect effects of pesticides can be particularly devastating for biodiversity[2]. The effectiveness of modern pesticides is such that it is crucial we reduce their use to a minimum and ensure there is sufficient refuge habitat available within the farmed landscape to sustain our native biodiversity[3].

In fact, pesticides are indirectly subsidised by the public as their social costs (negative effects on human health, death of non-target organisms and pollution of the environment) are paid by society[4].

Facts & figures

- Studies in the UK and Germany conservatively estimate that the annual costs of pesticides for the environment and health amounts respectively to around €206m and €133m[5].
- Society is concerned about exposure to pesticides[6] where many pesticides are known for their carcinogenic or mutagenic properties[7]. The health effects of these risks are rising in society and a contribution of pesticides to these effects is likely[8].
- The number of multiple residues in food is rising; in one sample of grapes analysed in Germany 26 different pesticides were found[9].
- 84% of European crops rely on insect pollinators. In the UK, these services are worth around €513m (£440m) p.a. and the cost of replacing these services is estimated to be €1760m (£1,510m) p.a. compared with just €8.2-11.7m (£7-10m) p.a (<1%) to avoiding pollinator loss[10].

Recommendation

The CAP needs profound change to support the kinds of farming Europe needs in the 21st century. Public money must support public goods and production techniques and treatments that are friendly to the environment and to us. Taxpayers must see real value for the billions they invest in the CAP. Those who farm sustainably must be effectively supported while those who harm the environment should receive no public money.

If politicians are serious about lowering the health and environmental risks of using pesticides they must support a fundamental CAP reform now.

For footnotes, please refer to separate reference sheet

The CAP & Pesticides

pic1 & pic2: © Sint Smeding, Creative Commons (Flickr)

© Tadmore Images, Creative Commons (Flickr)r

Combating diabotrica in maize

The profitability of maize as an agricultural crop, and the increase in intensive livestock production have led to the establishment of large areas of continuous maize cultivation (monoculture) in the EU, substantially increasing the risk of pest problems. On average, around 22% of the maize area is grown in monoculture, with this percentage reaching 65,5% in the Netherlands, and 43,4% in Italy[11].

The Beetle called Western Corn Rootworm is a soil-inhabiting pest whose larvae tunnels inside the root system of maize leading to serious yield losses. Adult Western corn Rootworm are strong fliers and have spread quickly across Europe. Monoculture of maize provides ideal conditions for an increase in Diabrotica populations.

Insecticides are already used to protect maize against crop pests: 570 tons of active substance (270 tons carbamates and 137 tons organophosphates) are applied to maize in the EU per year[12]. Switching from monoculture to rotation can break infestation cycles which would significantly reduce the need for pesticide application[13].

© Sharyn Morrow, Creative Commons (Flickr)

French drinking water contaminated by French agriculture[14]

Without being aware of it, millions of French people are drinking water which contains aluminium, nitrates or pesticides in excess of legal thresholds. The situation is particularly acute in two departments of the famous intensive cereal-growing Parisian basin. Intensive agriculture has contaminated the groundwater so badly with nitrates and pesticides that numerous cities and villages cannot provide drinking water respecting legal thresholds.

In 2008, 17% of the population of Eure-et-Loir department received drinking water with pesticides above legal thresholds. French national data[15] shows that, in 2008, 5 million people received, at least one time per year, drinking water which did not comply with the regulation on pesticides. The alarming degradation of ground and superficial waters due to intensive agriculture has been denounced for decades in numerous official reports[16], but successive French governments have failed to challenge the existing agricultural model or enforce the polluter pays principle.

An integrated approach delivers pesticide reductions in Eure, France[17]

In response to similar issues as the one highlighted in the case study above, the chamber of agriculture of Eure has recently launched a project attempting to apply the concept of integrated production. This is aimed at testing to what extent it is possible for French farmers to reduce their pesticide use by 50% between 2008 and 2018.

A reference group, consisting of around 20 farmers, put into operation integrated production, introducing a number of sustainable agricultural techniques such as crop rotation (including introduction of legumes), selection of resistant varieties, and soil enrichment. After only two years the group achieved an overall reduction of pesticide use dependency of 50% (measured as frequency treatment index taking into account both toxicity and quantity of pesticides). Furthermore, all other environmental impacts were reduced by between 20 and 30%.

© Isamagia Creative Commons

Prepared by: