

GOOD FOOD MAKES EVERYTHING BETTER

PESTICIDES

SOME TOXIC SUBSTANCES get into our environment by accident.

Pesticides, however, are, released intentionally in order to kill things – and, influenced by what a 2017 United Nations report calls the "aggressive, unethical marketing tactics" of pesticide manufacturers, farmers are using more of them than ever.

The word 'pesticide' is a broad term encompassing toxic formulations that kill weeds (herbicides), insects (insecticides), fungi (fungicides), rodents (rodenticides) and other living things.

In addition to killing 'targeted' organisms, pesticides can be toxic to a variety of other organisms including birds, fish, beneficial insects, and non-target plants. They also contaminate soil, water, air and plants.

Farmers have always had to deal with the challenge of how to reduce crop losses due to invasive pests, weeds or plant diseases. It is

part of the job of growing food.

Reducing crop losses due to these things means more food to sell and to eat. The issue is how we control pests and whether, in the long run, farmers are using the safest possible products and procedures to do so.

THE CHEMICAL TREADMILL

Today, conventional farmers are caught on a vicious chemical treadmill.

Whereas they once relied on a number of different pest-control techniques – including rotating crops, co-planting and planting varieties suited to the landscape and climate – since the 1970s they have relied almost exclusively on chemicals.

But nature is adaptable; and the insects, invasive plants and microorganisms that cause plant diseases are, increasingly, becoming immune to chemical treatments (in exactly the same way that disease-causing

PESTICIDES

bacteria are becoming immune to antibiotics).

Farmers address this by using more and different combinations of pesticides. But this only encourages further resistance and places a huge burden on the environment.

In agriculture, pesticide use is also closely linked to other conventional farming practices such as the overuse of synthetic fertilisers, which damages the balance of living organisms and nutrients in the soil, making plants weaker, more vulnerable to infestation and infection and also less nutritious.

The increasing industrialisation of agriculture has also created an economic any way other than chemically.

Genetically modified crops (GMOs) were introduced, in part, to help farmers get off the treadmill. But, in the more than 20 years since they were introduced, they have actually increased the use of pesticides and pushed farming further

in the direction of the kind of intensive and industrialised farming that is already causing so much damage.

HARMING HUMAN HEALTH

Apart from damaging the environment, pesticides also harm humans, both directly (for instance, when they are exposed to drift from nearby field) and indirectly (when they are consumed via water or residues in food).

They are especially harmful to young children and pregnant/breastfeeding women.

A recent report by the Pesticide Action Network UK found that, contrary to assumptions, levels of pesticide residues in our food have risen over the last few years.

It found that 46% of the food analysed contained residues of one or more pesticides. This figure has risen every year and almost doubled since 2003 when it was just 25%.

Some argue that residues in food are within 'safe' limits. But decades of research has shown that exposure - even at so-called 'safe' levels is damaging to the neurological, hormonal and reproductive systems.

As a result there is now a large body of evidence linking pesticide exposure with different types of cancers, diabetes, Parkinson's, Alzheimer's, and amyotrophic lateral sclerosis (ALS), birth defects, and reproductive disorders.

CLEANER FARMING

Agroecological methods, including organic, provide farmers with the knowledge and tools they need to build soil fertility, raise abundant, healthy crops, and produce food that is clean and nutritious.

Although a very small number of pesticides can be used in organic, for example, these are used only in very limited cases and amounts. The substances tend to be derived from natural compounds and applied in a way that ensures no residues are left in the food.

As a result, UK government evidence on pesticide residues in food shows that around 95% of organic foods tested are free of pesticide residues.

treadmill, which leaves farmers with few affordable options for dealing with pests "Pesticides, are toxic substances, released intentionally into our environment in order to kill things."

Methods like Integrated Pest Management (IPM) are also widely used in agroecology.

IPM focuses on carefully managing the ecosystem, selecting resilient plant varieties, evaluating landscape design, promoting beneficial insects that eat or harmful pests, improving soil health, changing irrigation and fertilisation practices, and where necessary judicious use of select pesticides, using the least toxic substance to get the job done.

FUTURE-PROOFING OUR FOOD

Increasingly the notion that we need pesticides to 'feed the world' is being challenged.

Although some farmers believe that using fewer pesticides will reduce yields recent research from France shows otherwise. It found that nearly two thirds of all French farms could reduce pesticide use by 42% without damaging productivity or profitability.

Similarly, a recent review of hundreds of published studies over the last 40 years found that organic farming not only produces sufficient yields, can be profitable for farmers and protect and enrich the environment.

In addition, organic crops may be more resilient in conditions like drought, which are expected to increase with climate change.

We all have the right to live in a healthy environment, and to expect that our food is both free from poisons and nutritious.

Reducing our pesticide use is the first major step towards restoring the productivity and health of our farming system and ensuring we can all claim these basic rights for generations to come.



This leaflet is part of a series on sustainable food, produced by Beyond GM. References available online:

www.beyond-gm.org