

What food actually is in 2019

By Nina Stick, HOPE researcher WA

The food that most of us eat in 2019 has become industrialised, in that it is no longer natural (derived from nature). Unless food eaten has been grown at home organically, using organic seed or by purchasing organic and biodynamic produce, exposure to a multitude of toxic chemicals, irradiated food and “food” created in a laboratory and genetically modified organisms (GMOs) is highly likely. How did this come about?

New markets were sought after for some highly toxic and persistent chemicals left over following World War 11. They were used extensively and the market for them “exploded”. They have “landed” in food consumed, as insecticides (which contain arsenic), herbicides and pesticides. They act systemically* even though these toxic chemicals are often regarded as being safe to use and ingest. Since when have poisons been safe? This can lead to disastrous consequences. Most poisonous chemicals used in this way are almost always approved without adequate independent, long-term safety testing. There is even less data on the synergistic effects of the combination of these chemicals in an uncontrolled environment. Many chemicals are only required to be “tested” by the manufacturer. This is problematic as results may be biased and conveniently selected. Historical accounts of the use of these chemicals are not reassuring either. Rather, it disproves companies’ claims of safety. There are also issues of bioaccumulation**, off-target damage, plant and insect resistance, unexpected events such as natural disasters, spills and accidental exposure.

There are many, many cases of mass deaths of wildlife and sickness/sudden illness in humans (given the systemic nature of pesticides etc). When wildlife comes into contact with the insecticides etc, including vapours, they become poisonous themselves, thus creating a cycle. For example, a bee comes into contact with nectar, takes it back to its hive, and ends up poisoning the honey. The honey may then be ingested by humans. Some chemicals are also applied directly to animals, which may end up in food also. I’m not debating through this avenue whether one should or should not eat meat (although there is much evidence being released on the benefits of a vegan/vegetarian diet on health and it is considered to have less of an environmental impact), and I applaud those who demonstrate food discipline in areas they believe in, such as veganism and vegetarianism. I recommend reading *An Omnivores Dilemma* by Michael Pollan if you are interested and visit <https://michaelpollan.com/books/the-omnivores-dilemma/>

DDT (dichloro-diphenyl-trichloroethane)

An interesting anecdote of a very toxic and persistent chemical is DDT, which became available on the market in the 1950’s, peaking in sales in 1959. It did not exist before World War 11. After the war, companies had huge capacities to produce it but no market. DuPont was provided with the licence to produce it. Despite legitimate concerns, DDT became popular, also contributing to the chemical input model that we see today. One of the active ingredients in DDT is Agent Orange. Concerns by scientists were largely ignored and then in 1972, after almost 30 years after its first application, all uses of DDT were banned in the United States and other countries. Even today, DDT is still found in soils and the environment; it persists. There are links between DDT and cancer still occurring decades after it was banned. This is an important lesson in how to treat highly persistent toxic chemicals.

DDT is now manufactured as 2, 4-D, a synthetic herbicide, which causes death by disrupting hormonal processes in plants and is used to kill broadleaf plant species so can be sprayed around grains, corn and rice without killing them.

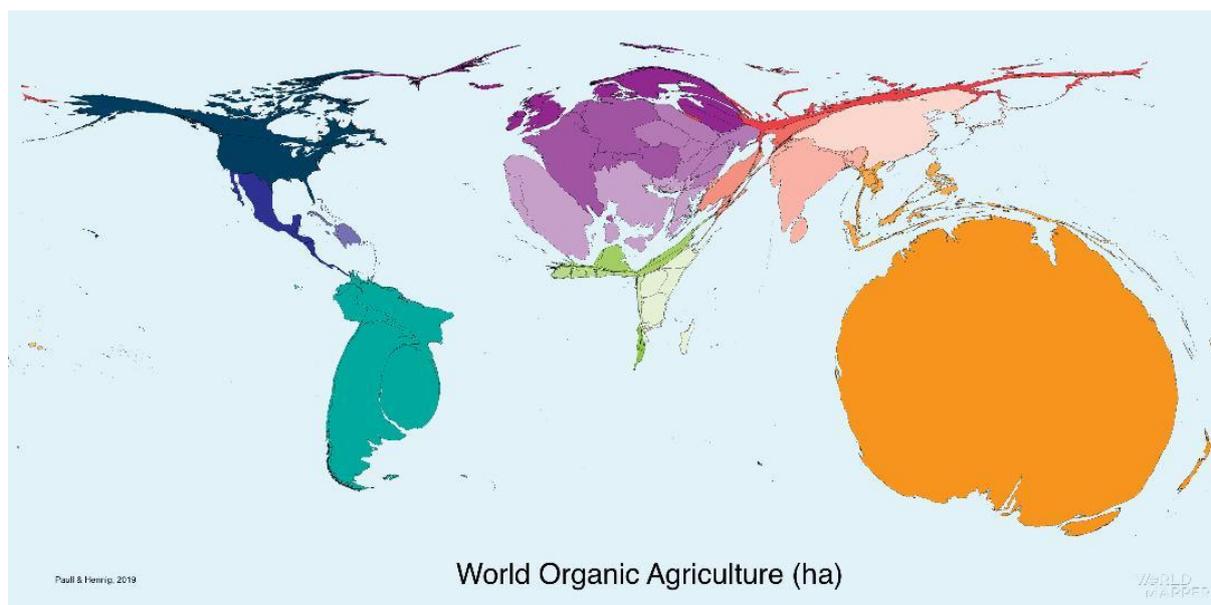
Just as many chemicals like DDT, and now GMOs also, are “pitched” as being safe and solving world problems when they are actually creating more. It is particularly important for pregnant women and children to avoid ingesting these toxic chemicals. Babies are now being born with 200 synthetic chemicals or more and children’s bodies are not developed enough in many ways to cope with, metabolise and remove these toxic chemicals from the body. I highly recommend reading *Chemical Free Kids* by Dr Sarah Lantz and visit <http://www.chemfreecom.com/library/chemical-free-kids/>

So how did it get to this/be this way?

The promotion of a “safe level” or dose of use gets the product for sale and “over the counter”. In reality, there is often no safe limit. “Acceptable levels of harm” is also utilised, sometimes disguised by “risk assessment”. This is a promotion of “junk science”, in my opinion. The chemical industry also lobbies, lies, manipulates politicians, raises doubt, orchestrate propaganda and deliberately misleads the public to fulfil its own agenda. Independent scientific studies are suppressed and self-regulation is promoted. Product bans by government sometimes result in lawsuits by the manufacturer. Toxic chemicals have also been linked to non-Hodgkin’s Lymphoma, also known as the “farmer’s cancer”, reproductive problems and birth defects, just to name a few. The impact of these chemicals on soil has also been well documented. Soil and soil structure play a vital role as a growing medium for plants and nutritious food and is an essential component of natural cycles, also supporting earthworms, fungi and bacteria, and vice versa. They work together to create healthy, flourishing ecosystems and farming systems. Regenerative agriculture, a relatively new term, recognises the importance of soil and the impacts that soil degradation can have on an ecological system. It works with the land (instead of against it), also buffering the impacts of climate change. If an ecological system is healthy, insect infestations, such as mosquito outbreaks, are much less likely and the need for chemicals is therefore reduced.

Organic and Biodynamic

The good news is that there is plenty that can be done to avoid these harsh chemicals which have become so prevalent in modern societies, and organic and biodynamic farming industries are some the world’s fastest growing industries. Australia accounts for 51% of the global certified organic agriculture in hectares. Some very exciting news!



Credit: Paull, J., & Hennig, B. (2019). New world map of organic agriculture: Australia is 51%. Acres Australia, 101, 35-36.

Levels of pesticides, herbicides etc have been reported to be much lower in those that eat organic. Organic and Biodynamic certifying bodies were created in the 1980’s as a response as an alternative to the new model of chemical farming, and it is really just a reflection of farming methods prior to the chemical era of farming. The certification process is rigorous and costs farmers so I believe in supporting people doing what I consider to be the right thing. It’s a willingness to be transparent and transparency is key. Or even better, visit the farm and talk to the farmer. Avoiding synthetic chemicals also means the avoidance of animal testing as some of these chemicals are tested on animals, which is great news for vegans! When you purchase organic and biodynamic produce, ensure that the product has a logo of certification to support the claim, of which there are many certifying bodies these days. Listed below are some of the websites on common ones on produce in Australia:

<https://www.nasaa.com.au/>

<http://www.australianorganicbrands.com/certified-organic/biological-farmers-australia>
<https://www.usda.gov/topics/organic>
<http://demeterbiodynamic.com.au/>

“Spray-Free”

Be careful of this term, which is often confused with organically grown produce. It can be more of a marketing term and sales point than being completely “spray-free” which organics and biodynamics actually is! “Spray-less” is probably closer to the truth. Sometimes, the term can refer to only not spraying at the harvest stage. Neither is it likely to be free from fertilisers, other synthetic inputs and/or GMOs. It is not a legal term and is not regulated. Again, get to know your farmer.

Going organic really is worth it. I believe that you pay for what you get, especially with food! It is said that we vote with our money. Prevention is better than cure, and like the Precautionary Principle basically states, “Better safe than sorry”. Adopt a holistic approach to health.

*The ability of a toxin to permeate all tissues and cells of the organism

**The accumulation of toxins ingested by organisms which increases through the food chain



Further reading

The Chemical Maze by Bill Statham

The Additive Alert by Julie Eady

Going Organic by Kris Abbey

Protecting your Fertility. The Dangers of Conventional Pest Control and Natural, Safe Alternatives Revealed by Gabriela Rosa

Going Organic enewsletter