



Do You Know What Is on Your Plate?

By Betty Guchu



I had never really given much thought to what I ate and how it was produced. That is until, in the early 90s, an outbreak of Bovine Spongiform Encephalopathy - BSE, more commonly known as mad cow disease - led to the [slaughter of 4.4 million head of cattle](#) in the United Kingdom in an effort to contain the disease, and to a decade-long ban of British beef exports that ruined that country's beef industry. The BSE outbreak is thought to have been caused by the practice of supplementing cattle feed with meat-and-bone-meal (MBM) rendered from the remains of other animals. The disease soon crossed over to humans through the consumption of BSE-contaminated beef, a new version of the neurological Creutzfeldt-Jakob Disease ([vCJD](#)) that took its [first victim](#) in May 1995 and has killed 177 people to date. In 2013 researchers reported that [one in 2,000 people in the UK](#) are carrying the human form of mad cow disease.

That same year, in February, a government livestock inspector was [assassinated](#) outside his home in the Belgian Flanders; Karel Van Noppen had been investigating the illegal trade in synthetic growth hormones that unscrupulous beef farmers were using to speed up the fattening of beef cattle and turn a quick profit. The use of synthetic growth hormones in cattle rearing has been found to have [adverse effects on human health](#). I was living in Belgium at the time and I started asking myself what I had been eating. I wasn't the only one; by the end of the decade, astute beef farmers were turning a tidy profit from the sale of [organic beef](#) to consumers like me who had become wary of the factory methods of production that had led to the BSE crisis.

With the appearance of organic beef on Belgian supermarket shelves, other organic produce soon followed and the shelf space dedicated to organic foods steadily grew. [IFOAM-Organics International](#) defines organic agriculture as “a production system that sustains the health of soils, ecosystems, and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation, and science to benefit the shared environment and promote fair relationships and good quality of life for all involved.”

Today, in the West at least, it is perfectly possible to eat, drink and [even dress](#) only organic; but you must have deep pockets because [organic produce is more expensive](#) than conventionally grown produce.

The right to adequate food is recognised in the 1948 Universal Declaration of Human Rights and is enshrined in the 1966 International Covenant on Economic, Social and Cultural Rights of which Kenya is a signatory. The Office of the High Commissioner for Human Rights of the United Nations clarifies that the [right to adequate food](#) implies that food must be available, accessible and it must also be adequate, meaning that “the food must satisfy dietary needs . . . be safe for human consumption and free from adverse substances, such as contaminants from industrial or agricultural processes, including residues from pesticides, hormones or veterinary drugs” The irony is that even though produce that is certified organic meets all of these requirements, it is not produced in sufficient quantities and where it can be found, it is beyond the reach of most consumers, whether they are in the West or here in Kenya.

Having jumped on the organic consumers’ bandwagon back in Brussels after the 1998 [dioxin-contaminated chicken crisis](#) finally convinced me to abandon conventionally-grown produce, I was keen to maintain the lifestyle once back in Kenya, only to find the limited choice of produce that is [certified organic](#) prohibitively expensive. I did the next best thing and decided to grow organic fruits and vegetables, both for my own consumption and for sale to the end consumer, and thus did I come into close contact with the world of farming.

City girl born and bred, and never having grown so much as a blade of grass, I needed all the help I could get and turned to Mr John Wanjau Njoroge, founder and director of the [Kenya Institute of Organic Farming](#) and a pioneer of the organic movement in Kenya. Mr Njoroge sent me a recently graduated young couple who set me on the road to organic farming. It has been a steep learning curve; after a first successful crop of greenhouse tomatoes, bacterial wilt decimated the second one.

Kenyan [smallholder farmers](#) produce 80 per cent of the 400,000 tonnes of tomatoes produced annually — representing 7 per cent of all horticultural produce grown every year — but commercial production of the fruit is fraught with difficulties; if it isn’t tuta absoluta, it is fusarium wilt, or if you’re really unlucky, it is both. And so, to control these and other pests and diseases, farmers reach for chemical pesticides and fungicides.

The trade in pesticides in Kenya is largely [in the control of private sector distributors and retailers](#) who import and distribute the products to the Kenyan end-user, but there appears to be a training deficit in the safe use of these chemicals. Farmers rely on agrovets and agricultural extension officers for information on pesticides, yet the Kenya Organic Agriculture Network (KOAN) has [reported](#) that “they are recommending pesticide products that are toxic to human health, bees and fish”.

An [analysis](#) of pesticide residues in tomatoes and french beans from Murang’a and Kiambu counties found the presence of omethoate in tomatoes, an active ingredient whose use in vegetables is banned in Kenya, suggesting “poor pesticide handling practices by some tomato farmers in the two

counties”.

And the situation is not much better in Laikipia County where a 2019 study of pesticide application and [pesticide residue levels in kales and tomatoes](#) in the Ewaso Narok wetland found that the majority of farmers had no training in the use of pesticides. The study also found chlorpyrifos and diazinon residues in the tomatoes sampled; both these active ingredients are banned in the European Union.

It is particularly worrying that chlorpyrifos — a pesticide that is harmful to the brains of fetuses and young children — can still be found on the Kenyan market. Chlorpyrifos was [banned](#) in the EU in February 2020 but it is also one of the seven active ingredients in the pesticides and fungicides that were found by KOAN to be in use in [Kirinyaga and Murang'a counties](#).

KOAN reports that “The pesticides withdrawn in Europe are mostly used on tomatoes (15 active ingredients), followed by kale (14), maize (14), cabbage (10), coffee (10) and french beans (6). Since tomatoes, kale, maize and cabbage are part of the daily Kenyan diet, there is a real and significant threat to food safety.” The study found that tomatoes had the highest toxicity score, followed by kales and maize, all foods eaten by Kenyans daily.

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But even more worryingly, KOAN reports having found high residue levels of acephate and methamidophos in the tomatoes sampled. Acephate, which has been withdrawn in Europe, is registered by the Pest Control Products Board for use on roses and tobacco. Methamidophos is not registered for use in Kenya.

The reason why active ingredients which have been withdrawn in the EU (or whose use is restricted) find their way to Kenya is because of the so-called Double Standard; [EU Regulation EC304/2003](#) allows EU companies to produce and export to other countries pesticides that are banned or restricted in the EU, effectively protecting EU citizens while exposing non-EU citizens to the ravages of dangerous chemicals and infringing on their right to food that is safe for human consumption. Indeed, the [United Nations Special Rapporteurs on Toxic Wastes and the Right to Food](#) have found that “widely divergent standards of production, use and protection from hazardous pesticides in different countries are creating double standards, which are having a serious impact on human rights.”

And while the [Rotterdam Convention](#) requires an exporter based in an EU member state to indicate their intention to export banned or severely restricted chemicals to a non-EU country so that the latter is alerted, this arrangement is hypocritical and merely serves to enable EU companies to continue manufacturing dangerous chemicals for sale in non-EU countries while providing them with the ready excuse that importing countries are aware of the nature of the chemicals they are bringing in.

Domesticating the 1966 International Covenant on Economic, Social and Cultural Rights, Article 43 (1) (c) of the Constitution of Kenya 2010 states that, “Every person has the right to be free from hunger, and to have adequate food of acceptable quality.” In line with this last requirement, and in the face of the dangers presented by the poorly regulated trade in pesticides, the Route to Food Initiative (RTFI), Biodiversity and Biosafety Association of Kenya, Kenya Organic Agriculture Network and Resources Oriented Development Initiative [petitioned the National Assembly](#) in September 2019 to withdraw harmful pesticides from the Kenyan Market.

In their petition, they reported that there are products on the Kenyan market which are classified as carcinogenic (24), mutagenic (24), endocrine disrupter (35), neurotoxic (140) and many others which have been shown to have an effect on reproduction (262). The petitioners argued that, while the volume of imports of insecticides, herbicides and fungicides had grown 144 per cent between 2015 and 2018, there was no data available concerning pesticide use and its impact on food and the environment, and also noted that the increase in pesticide use had not been accompanied by the necessary safeguards to control their application.

The petitioners also said that by failing to publish information in its possession on the levels of pesticide residues in food samples collected, and to put in place a monitoring system, the Kenya Plant Health Inspectorate Service (KEPHIS) was acting in contravention of Section 15 of the [Pest Control Products Act](#). The petitioners also accused the Pests Control Products Board (PCPB) of failing to adhere to the international codes of conduct of the World Health Organization (WHO) and the Food and Agriculture Organization (FAO).

In its [report](#) on the petition tabled a year later in October 2020, the National Assembly's Departmental Committee on Health responded that a blanket ban "without due consideration or risk assessment will not help, especially in the tropical conditions and areas experiencing an invasion of pests and diseases throughout the year." The committee also argued that "severe limitation of the number of products available . . . will make sustainable use of plant protection products difficult, particularly managing the development of resistant pest populations." The committee claimed that such a ban would threaten food security, lead to expensive food and reduced farmer incomes due to insufficient production.

The committee did however recommend that the PCPB develop regulations to ensure that only licensed and registered persons run agrovets outlets, and that the Ministry of Agriculture, Livestock and Fisheries undertake an analysis of the products on the Kenyan market in order to exclude those that are carcinogenic, mutagenic, neurotoxic and endocrine disruptors, and recommend the withdrawal from the Kenyan market of harmful and toxic pesticides. All this was to take place within 90 days.

Well, I visited two agrovets in our little township here in Nyandarua County who both told me that PCPB inspectors came calling last year to ensure that licence fees were paid and to ascertain that the products on their shelves had the PCPB logo indicating that they are authorised for sale in Kenya. Neither has been informed of any changes in the PCPB list of pest control products registered for use in Kenya and I could have bought pesticides and fungicides containing all but two of the active ingredients that KOAN found on produce in [Kirinyaga and Murang'a counties](#): chlorpyrifos, which as I have mentioned above is harmful to the brains of foetuses and young children; diazinon, a neurotoxic organophosphate; permethrin, a neurotoxin that is also highly toxic to animals, particularly fish and cats; bifenthrin, which has been classified as a possible carcinogenic; and carbendazim, a mutagenic fungicide that can cause birth defects and damage fertility. These active ingredients — all of which are banned in the EU — are among the top ten most harmful ingredients in terms of toxicity for humans and the environment.

[Route to Food](#), which has done a study on pesticide use in Kenya, notes that, "Pesticides can persist in the environment for decades and pose a global threat to the entire ecological system upon which food production depends. Excessive use and misuse of pesticides results in contamination of surrounding soil and water sources, causing loss of biodiversity, destroying beneficial insect populations that act as natural enemies of pests and reducing the nutritional value of food."

If we are agreed that access to safe food is a human right, then we must reject food production methods that endanger our health and put our lives in peril, that pollute our water and our

environment and jeopardise our biodiversity, methods that put the profits of the shareholders of companies domiciled in foreign countries before the wellbeing of Kenyan consumers.

It is ironical that Kenya goes to great lengths to meet the phytosanitary conditions and [Maximum Residue Levels \(MRLs\) imposed by the EU](#) - Kenya's main market for horticultural exports - while at the same time exposing its own citizens to the dangers of toxic pesticides manufactured in the EU.

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We are not condemned to remain on the path of industrial agriculture, which has proven to be so devastating to the environment and to human health. As Daniel Maingi [notes](#), "Perhaps it is time we looked to nature and farmers' know-how in using another branch of science called agroecology" which, as the [Food and Agriculture Organization](#) (FAO) has recognised, is "holistic, balancing focus on people and the planet, the three dimensions of sustainable development - social, economic and environmental - while strengthening the livelihoods of smallholder food producers."

We must therefore be vocal in our support of the endeavours of organisations such as the Route to Food Initiative, Biodiversity and Biosafety Association of Kenya, the Kenyan Organic Agriculture Network and Resources Oriented Development Initiative, in order to ensure that the recommendations of the National Assembly's Departmental Committee on Health do not remain a dead letter but form the basis of a fundamental change in the way we produce the food we eat.

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