

A UK Farmer's Perspective: What are the Consequences for Sustainability and the Public When Biotechnology Innovations are Withheld?



GMO Beyond The Science



Jake Freestone, Farm Manager at Overbury Farms, West Midlands, United Kingdom | July 10, 2018

Highlights:

- *European politicians bows to activist pressure, voting to restrict crop biotech pesticide tools, such as glyphosate and neonicotinoids*

- *Bans and restrictions will roll-back sustainable farming practices*
- *Farmers feel they are heading backwards in time, forced to adopt less ecological practices that will result in higher food prices*

How much would your life change if the government suddenly were to ban mobile phones?

It would alter everything, mostly for the worse, from how you work to how you communicate with your family. In time, perhaps, you'd get used to it: Our parents managed to survive without these devices for most of their lives. I anticipate we'd figure out a way as well, but it would certainly cut into our efficiency, and our lives are busy and complicated enough as it is.

That's what we face today in farming, at least here in the United Kingdom. I, along with the majority of the population, do not want to revert to 20th-century technology. We'd lose so much. But farmers here face constant pressure to go backward in time.

In Europe, for example, politicians last year [nearly banned](#) us from using the world's most popular crop-protection tool, glyphosate, which has been used safely for almost four decades and has a [stamp of safety and sustainability](#) from every major regulatory agency in the world.

This year, a European Union court [released a judgment](#) that will deny our access to several neonicotinoid insecticides that defend crops from destructive pests based on [inconclusive data](#) that they might be a factor in bee health problems; they will be [replaced by insecticides phased out 20 years ago](#) which are known to [actually kill bees](#) and may pose a health threat to humans.

All too often, people see technology as a threat rather than a resource. This is especially true when it involves a poorly understood technology that's vulnerable to propaganda and misunderstanding. In my case, as a farmer, this means technology specific to agriculture, needed by farmers but also scorned by people who don't understand or appreciate the difficulties of sustainable agriculture and take for granted that their food will show up at reasonable prices in grocery stores and restaurants.

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An obvious example for Europeans is GMO food. Whereas [much of the rest of the world has embraced this safe technology](#)—Argentina, Brazil, Canada, South Africa, the United States, and more—much of Europe has rejected it. Most consumers don't know what they're missing, but we farmers do, because we know that our competitors in other nations have taken advantage of sound science to grow more food on less land.

The debate will only intensify, as CRISPR gene-editing tools give farmers even more versatility—especially as consumers begin to clamor for near-future advances that promise to improve the nutrition and taste of what we eat everyday.

Today's EU biotech challenges

But that's to come. We're presently in the thick of several controversies that affect how I farm and produce food right now.

Consider the case of glyphosate, a crop-protection technology that helps me fight weeds. In 2017, the European Union nearly banned it—and the [activists behind this political agenda haven't given up](#). They may yet succeed in having glyphosate outlawed.

For two decades, glyphosate has helped us grow food sustainably on our farm, which is in the United Kingdom, in an area called the West Midlands. We raise bread-making wheat, malting barley, linseed, and more. We also set aside a small part of our acreage for salad onions and handpicked peas and have a flock of 1,200 grazing ewes.

[If we were to lose glyphosate](#), we'd have to return to old-fashioned cultivation for weed control, which means using machinery to turn over topsoil. This would come with a steep environmental and economic cost. We'd suffer soil erosion, turn to stronger chemical controls, and produce less food.

Long experience tells us that glyphosate is safe. If it weren't safe, I would refuse to use it on my farm. When it comes to chemical applications to fields, of course, farmers are on the front lines. We face the greatest risk of harmful exposure. It makes no sense for us to adopt products that pose threats to our health. That would be suicidal.



Better than experience is science—and science, too, tells us that glyphosate is safe. It's toxic to weeds, but it breaks down quickly and does not enter the human food chain. Regulatory panels have confirmed this, including the European Food Safety Authority and the European Chemical Agency.

'Rogue' agency' classifies glyphosate as 'probable human carcinogen'

The French-based International Agency for Research on Cancer is the [single outlier](#). It claims a connection between glyphosate and cancer in people. Mainstream scientists have debunked its conclusions, and IARC has a reputation for pursuing scary theories rather than embracing scientific evidence. Yet its statement have prompted activist groups to turn glyphosate into an issue of politics, rather than a matter of science, agriculture, and consumer economics.

Some might say: Better safe than sorry. Initially, that familiar saying sounds reasonable, and it's at the heart of the "precautionary principle," which drives so much of the regulatory decision-making in Europe. The idea is that if we can't be absolutely certain about a product's potential hazards, then we shouldn't allow its widespread use.

In practice, the precautionary principle smothers innovation: nothing is ever safe enough to satisfy everyone. If we followed it in everything, we'd have to ban mobile phones, because the IARC has classified them as "possibly carcinogenic."

Thankfully, we haven't taken this step—but we've taken it in other areas, especially agriculture. This is partly because only farmers see the regulations that affect us. They in fact affect everybody, but they're invisible to non-farmers, which is to say most people.

As it happens, there's nothing safe about denying farmers access to the crop-protection technology of glyphosate—and doing so would deliver a series of unwelcome and unintended consequences on my farm and the farms of others.



Credit: Ian Burt, Eastern Daily Press

The first is that our soil would erode, causing us to lose moisture, nutrients, and biodiversity. We'd resort to alternative sprays that are more toxic and stay in the soil longer. We'd also run our equipment over our farmland more frequently, increasing our emission of greenhouse gases.

The advent of glyphosate allowed us to abandon these harmful practices. Banning it would pressure us to take them up again.

We'd grow less food, too. If our crops face more competition from weeds, our acres would become less productive. This means that food prices would inch upward. It's simple economics: Reduced supplies mean higher costs for consumers.

One of the miracles of modern agriculture is that we grow more food on less land than ever before. This is a boon for conservation. A ban on glyphosate would turn back the clock: We'd grow less food on more land, hurting our efforts to conservation.

Will we lose glyphosate? I'm not sure. But I do know that we're losing crop-protection tools all the time. In May, for example, a European court approved a ban of "neonics," a popular pest-fighting technology. The allegation—and it's merely an allegation—is that neonics kill too many bees. The science on this is far

from clear, and many factors stress bee populations, from parasites and diseases to a loss of habitat and nesting sites. None of these causes have anything to do with the crop-protection tools that farmers use, and yet we're the ones who have to pay the price.

So imagine a ban that causes you to give up your mobile phone. The sensation is not altogether different from my experience as a farmer, forced to confront the possibility of losing the latest technologies and drifting backward in time.



Jake Freestone is the farm manager at [Overbury Farms](#), located in the West Midlands, United Kingdom, which grows bread-making wheat, rapeseed oil, malting barley, peas, linseed and soya along with 1,200 ewes. Jake volunteers as a member of the [Global Farmer Network](#).

[Global Farmer Network](#) (GFN) is a non-profit advocacy group led by farmers from around the world who support free trade and farmers' freedom to choose the tools, technologies and strategies they need to maximize productivity and profitability in a sustainable manner. Established in 2000, the Global Farmer Network is committed to inserting the world's farmers' voice in the global dialogue regarding food and nutritional security. The Global Farmer Network identifies, engages and supports strong farmer leaders from around the world who can work with others to innovate, encourage and lead as full stakeholders in the work that is being done to fill the world's food and nutrition security gap in a sustainable manner.

The [Genetic Literacy Project](#) is a 501(c)(3) non profit dedicated to helping the public, journalists, policy makers and scientists better communicate the advances and ethical and technological challenges ushered in by the biotechnology and genetics revolution addressing both human genetics and food and farming. We are one of two websites overseen by the Science Literacy Project; our sister site, the Epigenetics Literacy Project, addresses the challenges surrounding emerging data-rich technologies.

GMO Beyond the Science III

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