Because we can, does it mean we should? The ethics of GM foods

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Food is cultural, social and deeply personal, so it's no surprise that modifications to the way food is produced, distributed and consumed often lead to ethical debates.

Developments in the genetic modification (GM) of foods and crops has

resulted in a raft of controversies.

Ethics can help here. While science determines whether we can safely modify the genetic makeup of certain organisms, ethics asks whether we should.

Ethics tries to move beyond factual statements about what is, to evaluative statements about the way we *should* act towards ourselves, each other and the environment we inhabit. But things are not always so clear-cut.

Three areas of ethics can help frame some of the concerns with GM food and crops: virtue, moral status and consequences.

Virtues vs vices

Ethics of GM foods can be developed by looking at virtue or character. Does the activity of engaging in the development of GM foods and crops erode virtues while producing vices? Or is GM technology a prudent use of knowledge for humanitarian goals?

Character or virtue-based arguments are seen in the case of golden rice – a rice strain modified to contain beta-carotene, a precursor of vitamin A.

According to the World Health Organisation more than 250 million preschool age children are vitamin A deficient (VAD), and two million deaths and more than half a million cases of blindness are attributed to VAD. The developers of golden rice say it will supply 60% of the recommended daily intake of vitamin A.

But global outrage ensued after group of Filipino farmers destroyed a test crop of golden rice. There has been little recognition of the Sisyphean struggle of farmers in countries such as the Philippines,

Bangladesh and India, yet these farmers have been described as anti-science Luddites and contributing to the deaths of children.

Critics of golden rice such as Wendell Berry and Vandana Shiva argue that GM technology is a solution offered by industrial agriculture to address problems created by industrial agriculture.

Golden rice is a techno-scientific fix to structural problems created by some of the very companies that may profit from GM crops.

Although golden rice is a non-profit initiative, Shiva argues that it is a trojan horse to give GM crops a humanitarian face.

According to opponents such as Shiva, golden rice and GM crops not only pose negative consequences for farmers, environment and the global poor, but represent vices of greed, arrogance and dominance. Rather than humbly working with and caring for the natural environment, industrial and technological interventions seek to master, profit and control.

Morality of nature

There are also concerns about the moral status of the organism itself – does the modification of an organism's genetic makeup represent a wrong to the dignity or integrity to the organism?

This position depends on arguments that nature has dignity and interests beyond those of its human inhabitants. Such arguments are not readily accepted due to their metaphysical or theological overtones and dependence on essentialist idea of nature.

Appeals to nature can led to what British philosopher G.E. Moore described as the naturalistic fallacy – the idea that we can derive moral

statements from facts of nature. Examples include:

- raw milk is good because it's natural
- standing desks are good because we weren't meant to sit
- genetically modified crops are wrong because they're unnatural.

Perhaps we aren't so concerned about the essential dignity of rice or wheat, but what about GM pigs that glow in the dark, featherless chickens, cows that produce human milk or the integrity of an ecosystem? Although the arguments are relatively the same, in discussing GM animals, the idea of a natural integrity or dignity seems more compelling.

Weighing up consequences

The most common way of framing the ethics of GM foods is to ask: do GM foods and crops present negative or harmful consequences for individuals, populations or the environment? Answers to this question vary according to context.

Most scientists argue that GM foods are safe to eat and will not harm consumer health.

While critics maintain that long-term health effects are uncertain, they contend that even if GM foods are safe to eat other harmful consequences should be considered, such as the impact of patenting laws on farmers and research integrity, or the risk of GM crops contaminating other crops or escaping into the wild.

Debates over consequences tend to avoid the question of whether there is something inherently objectionable about GM foods and crops. So long as there is appropriate management of risks, then theoretically, there is no ethical problem.

It is unlikely these issues will be resolved any time soon – and likely that new ones will be added – but one area that can be worked on is discourse ethics.

Describing opponents of golden rice, even those that destroy test crops, as committing crimes against humanity or those in favour as pursing economic self-interest does little to move the debate forward.

Until productive discourse is established, barriers between opposing views will only strengthen.

Source: The Conversation