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## Bioethical Issues of Genetically Modified Crops: The Rights of the Farmers

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### Abstract

National Agro-Food Policy 2011–2020 considered genetic modification (GM) technology as a way to ensure food security in a sustainable industry. The soon to be launched National Agro-Food Policy 2021-2030 (DAN 2.0) aims to transform the agri-food sector into a sustainable, competitive, and high-technology industry. Modern biotechnologies will boost economic growth and improve people's well-being. The legal framework that is currently in place covers the procedural aspects of GM technology which focuses on balancing the development of biotechnology industries and the protection of people and the environment. It applies the principles of risk assessment and risk management. Preservation of fundamental principles of human rights makes it crucial to assess the ethical aspects of GM technology. This paper aims to assess the bioethical issues in GM technology relating to farmer's rights and to propose for an integration of bioethical issues in the decision-making process. It will provide an overview of overlapping regulatory frameworks for biosafety pertaining to GM crops. This is normative research with a legal approach that emphasizes the common analysis through secondary data. As an output, this paper will produce a legal framework that assesses the ethical issues of GM crops which can assist the policymakers and relevant stakeholders with regards to decisions that impact farmers' rights.

**Keywords:** Bioethics, Biosafety Law, Farmers' Rights, Protection

### Introduction

Malaysia has not adequately addressed these bioethical issues. Biosafety regulatory measures were gazetted to deal with balancing modern biotechnology development and the protection of the environment. Farmers' right to livelihood and rights to contractual justice have been ethically disregarded. Ethical principles are usually viewed as descriptive and unintelligible to be translated into practice. Hence, for the protection of farmers' rights in the use of GM technology, the ethical implication of the technology must be critically scrutinized.

By way of normative research approach, this paper investigates the bioethical issues relating to GM crops that affect the farmers' rights in Malaysia. The extent of the legal framework, policy and good practices play essential roles in assessing the ethics of GM crops in protecting farmers' rights in Malaysia.

### **Research Objectives**

- To examine the bioethical issues in GM technology relating to farmer's rights.
- To propose for an integration of bioethical issues in the decision-making process

### **Literature Review**

Genetic modification (GM) crops are introduced for crops diversification that could contribute to sustainable agriculture in a warmer world through GM technology (Abraham & Mel Dollison, 2019). However, concerns about GM crops transcends many bioethical issues, which includes, bioethical debates on human rights (Siti Hafsyah, 2019; Jenniffer, 2019). GM crops' ethical assessment requires a different approach to bioethics that reflects the application of ethics in biotechnology. Literature and case law show that the bioethical issues of GM crops are linked to the farmers (Hafsyah, 2020; Beeckman & Rüdelsheim, 2020; Ruth & Frans, 2015). One of the most important ethical aspects of GM crops is that which concerns human rights derived from the Universal Declaration of Human Rights (UDHR). Human rights are critical in maintaining human dignity in a free and democratic society. Human rights are inherent and protected under the law and such protections can be accorded in the constitution, statutes, and common law. These are also unenumerated rights (Faruqi, 2008). Farmers, as humans, enjoy rights to be respected in the development of GM crops technology and such rights should be protected. Farmers' rights are indirectly incorporated within the statute and common law.

Despite this realization, matters relating to the protection of farmers' rights are not comprehensively addressed, ethically. Instead, scientific assessments, consumer protections, and the interest of businesses and corporations are taking priority over farmers' rights and interests (Leonelli, 2019). In recent years, bioethical debates on GM crops focused on extrinsic bioethics. It may address bioethical concerns but slanted towards exploiting the potential benefits of this technology, farm biosecurity and the corporate-dominated seed sector. These affect farmers' rights to livelihood and rights to contractual justice (Siti Hafsyah, 2020; Jenniffer, 2019). Faruqi (2007) raises concern that adopting GM crops would place farmers and the food chain under the control of a handful of multinational corporations. For one, potential genetic pollination of GM seeds onto non-GM crops is a concern to farmers especially those who certify their crops as non-GM crops or organic crops (Price, 2014). The financial burden associated with GM crops contamination is significant. Genetic pollination raises the ethical principle of justice relating to whether farmers planting GM crops are liable to their non-GM neighbours for pollen drift.

The enforcement part of the GM crops also raises several issues for concern. The European Union applies a stringent regulatory framework on the use of GM crops that requires strict approval requirements for its use. GM crops must undergo the three-tiered regulatory framework depending on the criteria of the GM crops (Eckerstorfer et al., 2019). However, enforcement authorities are faced with tough tasks in the detection of GM crops against the acceptable regulation. Analytical detection of such products and their identification requires

enforcement in the form of sampling and testing food, feed and seed products (Ribatris, 2021). In the context of Malaysia, the main regulatory authority and policymaker on biosafety issues are the National Biosafety Board (NBB). The use of GM crops must be mandated only by NBB (Ministry of Health Malaysia, 2010) and this creates a level of complexity in the monitoring and enforcement mechanism. For example, in GM food labelling cases, tracing unauthorised GM crops is proven to be tough in the absence of reliable documentation systems in addition to the limited capacity of detection methods (Jasdeep, 2020). This is further aggravated by the fact that the enforcement aspects of GM crops are done by officers from other Ministries that is lacking inappropriate equipment and expertise in detecting GM crops and their components. In fact, it is still unclear as to who is the responsible regulatory authority on the enforcement of guidelines involving GM crops in Malaysia (Nijar, 2017). Given current import trends and the status of GM product approvals, Malaysia must not rule out the possibility of unauthorised GM corn or soybeans being present in the local market (Ismail, 2021).

### **Methodology**

This is normative research with a legal approach. Coomans, Grunfield and Kamminga (2010) emphasise the use of normative research approach in the field of human rights where evaluation on policies and laws must be made cautiously. This method emphasises a common analysis through secondary data. Data were consolidated through an intensive literature study and examined using the legal norm method. This research design strives to present a systematic, factual and detailed insight into specific peculiarities, characteristics, or factors in a particular region. It utilises a qualitative juridical analysis based on logical legal analysis, logic, and argumentation. This paper has reviewed the literature on the bioethical issues of GM crops from various sources focusing on bioethical issues and farmers' rights and the legal framework affecting it.

### **Analysis and Discussion**

Farmers' right to livelihood assumes the obligations and imposes legal limitations when they sign GMO contracts, such as Monsanto's Technology Agreement. Common obligations include giving up the right to save seeds, opening their fields up to inspections by the company, and acknowledging that the company will be entitled to specified remedies if farmers violate the agreement (David and Michael, 2005). Under these contracts, farmers were asked to agree to several conditions such as the limitation on the warranties available for the GM seeds and the right to sue or seek resolution in the event of a dispute with the company. Biotechnology companies and seed companies require farmers to sign grower or technology agreements to maintain control over GMOs. These agreements generally give farmers the rights to use or "license" the GM seeds in exchange for complying with all of the company's production methods and management requirements. The farmers will not get an opportunity to negotiate the terms of the Technology Agreement which are at most of the times standard form contracts, which is offered on a take-it-or-leave-it basis as part of the seed purchase. This shows that the GM seeds industry practises bio-hegemonic culture in GM crops contractual agreements that raise concerns on the ethics of the contract. As far as contractual justice is concerned, everything is in order; but the way it is practised, ethical consideration is not ethical. It is the underlying basis of the contractual theory that in entering contracts, parties to a contract practise freedom of contract (Smith and Atiyah, 2006). Parties to a contract have the freedom to negotiate the terms and come to a consensual agreement

as to their rights, duties and liabilities. Therefore, since the notion of freedom allows the freedom to contract to the contracting parties, parties are deemed to contract voluntarily and are agreeable to the terms i.e. *consensus ad idem*. However, contracts between farmers and conglomerate companies question the practice of the doctrine of freedom of contract. The farmers have no choice in buying the GM seeds, and the terms are one-sided in favour of seed companies. Law per se is valid and binding, but not on ethical issues as it is not fair justice to the farmers. As appropriately challenged by philosopher TH Green who said that the primacy of freedom of contract in his liberal Legislation & Freedom of Contract: "To uphold the sanctity of contracts is doubtless a prime business of government but it is no less its business to provide against contracts being made, which from the helpless of one party to them, instead of being a security for freedom becomes an instrument of disguised oppression." Therefore, when a farmer signs a GMO contract, though in the form it conforms to the freedom of contract doctrine, in substance it is a disguised instrument of oppression.

The unfairness of unequal bargaining strength between the farmers and the conglomerate seed companies can also be seen especially when seed companies usually limit their liability by inserting a clause in the contract with the farmers. Under such a clause, if the use of GM seed harms another aspect of the farmer's operations, this clause precludes the farmer from recovering any damages from the company if the use of the product causes harm. As a result, the GM seed company or any seller will not be liable for any incidental, consequential, special or punitive damages. In Malaysia, farmers are not protected by any regulations if the terms of a contract are unfair. A farmer has a right to set aside a contract for example a seed contract only if it was entered into involuntarily i.e. there are vitiating factors such as coercion, undue influence, misrepresentation, fraud or mistake that negates free consent. Exploitive or oppressive terms does not negate the validity of a contract unless there are any procedural irregularities in entering into the contract. Furthermore, as mentioned earlier, the underlying basis of entering into a contract conforms to the doctrine of freedom of contract. The contracting parties are deemed to protect themselves. Morality or ethical considerations are left to the conscience of the parties. Law and ethics are not coextensive. Going against ethics or breaching ethics does not protect society with punishment if violated because ethics merely suggest what ought to be followed and explore options to improve in decision making.

Farmers can also be potentially liable for GM crops contamination. This situation requires ethical principles because, legally, the contract is valid, but ethically it does not justice the farmers. Plants reproduce via cross-pollination, and pollen is transferred from plant to plant and field to field by birds, insects, and even the wind, depending on the species (Teal, 2017). Through cross-pollination, farmers planting GM crops shall contaminate non-GM neighbours. Pollen transfer could result in a permanent or uncontrollable "escape" of genes from a GM crop to nearby plants of the same genus, wild or domestic (The World Conservation Union, 2007). Not only is genetic drift impossible to prevent, but inadequate regulation also fails to hold seed companies accountable for any resulting damage and ultimately puts the onus on farmers who became victims of contamination. Coexistence between organic, non-GM crops and GM crops production has become more difficult due to the potential for gene flow and commingling of crops at both the planting and harvesting levels. It has severe ramifications for organic and non-GM crops farmers that face economic harm due to lost markets or decreased crop values. If contaminated, farmers producing non-GM crops and organic crops can also lose access to international markets. Besides the threat of economic harm from

contamination, farmers who unintentionally grow patented GM seeds or harvest crops cross-pollinated with GM traits could face costly lawsuits by biotechnology firms for seed piracy.

An organic farmer in Western Australia loses licence after GM canola seed is planted on neighbour's estate. Securing a victory for GM crop farmers may pave the way for significant changes in GM crop production laws and increased liability. In addition, the decision could lead to more farmers losing their organic certification as GM crops spread, according to organic farming advocates in Australia (Supreme Court of Western Australia Judgement Summary: *Marsh vs Baxter* [2014] WASC 187 (Civil 1561 of 2012)).

*Marsh v. Baxter* demonstrated that the tort system does not take into account economic harm when determining liability. Because of the time-lapse between when damage is observed and when scientific proof is required, a prospective applicant may encounter difficulties and costs in determining predictability, triggering, and proving the extent of any damage. For example, they will also be ineligible for compensation if they are involved in an agricultural credential contract. This area of law and development is still in the early stages of development. To address this issue, more judicial or legislative oversight is required. If a self-inflicted fault caused the accident and the level of contamination was deemed "reasonable," then non-GM farmers must be fairly compensated for their losses. It is necessary to discuss food and agricultural practices that protect biodiversity, human well-being, and farmer livelihoods. Their lives and decisions are democratic.

Moreover, farmers are rarely involved in the consultation process (Lucht, 2015). This is because policy planners have not fully understood the opinion of farmers and that few farmers discuss the social, environmental, and economic consequences of GM crops. Even though the benefit of the herbicide/ insect tolerant GM crops outweighs the uncertain environmental risks, some farmers continually questioned and evaluated their decisions. The above situations of ignoring local experience-based knowledge are comparable to ignoring or denigrating indigenous knowledge systems by change agents in innovation diffusion. This again violates the principle of autonomy and justice to farmers. It is also against the four core principles of Farmers Rights concept as stated under Article 9 of the Food and Agriculture Organization (FAO) Treaty. Everyone has the right to own property alone and in association with others, and no one shall be arbitrarily deprived of their property.

The public perception of risk surrounding GM food, coupled with distrust of the risk managers, may increase or continue to amplify public concerns about this technology and fuel further controversies (Kasperson et al., 1992). Literature shows that public mistrust in GM crops project arose from public fear of corporate control of agriculture and its benefits. This is established as the global seed trade is currently dominated by a handful of giant corporations. About 80% of small-scale African farmers save their seeds. However, GM companies make it illegal to save GM seeds. National governments also fear relinquishing their food security sovereignty to the private sector due to their emerging dominance of the global seed market. Many farmers, particularly the poor and powerless, have little education and no social entry point to influence decisions about GM crops. They need to be given every opportunity to participate in the debate concerning the impact of GM crops on their lives and livelihoods and the potential benefits that may arise from developing and using such products. Without trust in these organisations, people may misperceive the risks and uncertainties and be swayed by those opposing the technology. The court may impose a constructive trust where there is unconscionable conduct on the part of any party when dealing with the property of another.

Like any other trust device, what is required prima facie revolves around the three certainties. Where properties are seized or forfeited illegally, under section 43 and section 45 Biosafety Act 2007, the courts may impose a constructive trust on the subject matter seized or forfeited for the benefit of the innocent party. It is the protection by common law that is not provided by the Biosafety Act 2007. The problem here is the certainty of the subject matter. Can the items seized or forfeited satisfy this criterion?

The New York University (NYU) School of Law's Center for Human Rights and Global Justice (CHRGJ) released a report examining human rights concerns surrounding farmer suicides in India (Center for Human Rights and Global Justice, 2019). The result of the report is that many smallholder farmers are faced with growing despair and indebtedness because they have been forced to buy into a system that does not benefit small farmers. This ultimately leads to the loss or degradation of their land and livelihoods, which means that implementing industrialised agriculture with GM crops constitutes a violation of their right to productive employment.

### Conclusion

In conclusion, bioethical concerns have not been adequately addressed in Malaysia so far. Bioethical issues that need to be addressed in biotechnology development must be balanced, through biosafety regulatory frameworks. Without adequate protection of ethical issues, this violates farmers' rights to livelihood and contractual justice. In order to protect farmers' rights when using GM technology, the ethical implications must be carefully examined. Legal framework, policy, and good practices all play an important role in determining whether or not GM crops are ethical when it comes to protecting Malaysian farmers' rights.

It is prevalent hoped that the findings of this research would contribute to the literature on bioethical and farmers' rights, which would attempt to accommodate bioethical issues raised by GM crops and, in so doing, strengthen and safeguard farmers' rights. This research could assist the biotechnology industry and research institutions in emphasizing farmers' rights, specifically in protecting farmers' rights related to bioethical arising from GM crops in Malaysia, which seems to be a displaced factor.

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