

CONTROVERSION AROUND THE FOOD PRODUCT AS A RESULT OF GENETICALLY MODIFIED ORGANISM

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Abstrak

Rekayasa genetik merupakan teknologi yang relatif baru, yang diterapkan pada tanaman dan ternak untuk meningkatkan mutu produk. Namun masih banyak hal yang belum diketahui oleh para ahli tentang organisme, hal mana dapat menimbulkan bahaya yang tidak terduga bagi manusia dan lingkungan hidup. Oleh karena itu rambu-rambu hukum yang mengatur tentang pengujian, dan pengawasan peredaran produk pangan yang mengandung teknologi rekayasa genetika, harus diterapkan.

INTRODUCTION

Genetically Modified Organism (GMO), a food product that in its production process used raw material, auxiliary material or supplement material has lately been a polemic issue in, local and even international newspapers and magazines.

The differences between experts are especially concerning the question *is this kind of food safe to be consumed by living species (especially human beings) or not*. Because the effect on living species can not immediately be seen or felt and can be irreversible or irretrievable, it is understandable that people worry about this food product.

This is not only expressed by experts who are involved in health and drugs (doctors and pharmacy experts) but especially by researchers who are involved in gene modification or transgenic technology itself and experts in environment. In general these experts can be grouped as one that is not against the use of Genetically Modified Organism (GMO) in the mass production of food product but who ask for an extremely carefulness. In other words, a food product with basic material, auxiliary material and supplement material which is GMO should have been tested longer and more accurately before being distributed and consumed by many people. They argued that once people neglect using this kind of product, the effect will be great for human

beings as well as for other living creatures.

Because the writer's discipline is not GMO and neither health, the writer is not in the position to discuss whether food product like this is safe, even though ideas from experts who are worried about this kind of food are also mentioned. What the writer is going to discuss in this short paper is particularly about the law aspect, the requirements that have to be fulfilled so that this food can be used in Indonesia and consumed by Indonesians. A problem related to ethics or moral and religion is also mentioned.

The objective of this writing is as follows:

- can the food product using basic material, auxiliary and supplement material as a result of GMO be used in Indonesia, and how should people treat this food product.

GENERAL OPINION

GMO is a relatively new technology abroad as well as in Indonesia. It has been known for 30 years (Consumers Association of Penang, 2002: 35). However, due to technology development and the effect of free trade, what is considered God's creation and which is tinkered by experts in a country, in a relatively short time is produced massly and distributed in the whole world, especially in the developing countries. The producers of food using GMO make use of the

developing countries weakness (in particular Indonesia) namely the weak enforcement and application of the law.

Article 1 subsection 12 of the Food Law (UU No.7 Thn 1966) give a simple definition of GMO as follows:

GMO is a process that involved the transfer of Gene (character) from a type of creature to another type of creature which is different or similar to get a new type that can produce a more powerful food product.

Whereas in article 1 subsection 5 of SKB Minister of Forestry and Plantation, Minister of Health, Minister of Food and Horticulture (SKB No. 998.1/Kpts/OT.2109/99; No.1145 A/Menkes/SKB IX/1999; No.790.a/Kpts – IX/1999) regarding the Animal and Horticulture Food Product as a Result of GMO (shortened as SKB about the Animal and Food Safety) is stated as follows:

GMO is an effort to change by accident a genom of a living creature by adding, reducing and/or altering the structure of the real genom by using DNA recombinan technic.

Put it in a simple way GMO (also sometimes called as biotechnology, genetechology, transgenic technology or recombinan) *is a scientific action which alter DNA (Deoxyribonucleic Acid) or the genetic substance of all living cells. They cut a certain gene of the DNA of a certain organism and insert it into the DNA of another living cell which is not of the same type or completely different, like human being, pig, goat, bacteria, etc. (consumers Association of Penang, 2002: 10). The result is the existence of a man made living creature in the laboratory, that did not exist before.* For example tomato that has a flounder fish that lives in North Sea gene which enables this fruit survive in cold weather and did not rotten in cold/frozen weather. Or maybe a kind of mouse which is very big because a human being gene related to growth is inserted in it. The transfer of a fish gene into fruits is done by making use of the bacteria or virus that will attack and enter the DNA main cell. So two (or more) organisms with different DNA is on purposely combined by people in a relatively short time.

According to Sutanto (Kompas, 28 June 2000) until 1997, 124 “new organisms” have been

made patent to be cultivated and marketed globally. This Biotechnology made man pass the biologic border, in animals, plants, as well as microorganism by inserting the character wanted by its creator.

However, because human being’s knowledge of DNA of various types of organism is still very limited, there are still many things that can not be controlled by human beings. As a result many unexpected things occur like human genes when inserted into a pig DNA, did not result into a big pig (compare mouse), but a sickly, limping and cross-eyed pig.

The tinkering with gene is done by experts to plants and cattle, with the purpose to develop and to make the quality of plants or cattle perfect so that the need for food (plantation and farming) can be fulfilled. For example fruits that can ripened faster, be bigger, have bright colour, have a good form and have a better taste. Or maybe cattle that can grow faster so they do not need much cattle food, can be sold faster and contains much meat. However, because human beings still have limited knowledge of genes of various organism, what is expected can not be reached (to develop the quality). But if the result is according to what its creator really wants, it is still not certain that it is better for human beings. For example, fruits as a result of genetically modification that can last for weeks in the shops and still look fresh, may be less nutritious.

It can not be denied that in the past human beings had and always had tried to develop the cattle’s and plant’s quality by selecting naturally or combining two organisms that are still from the same type or are still related to each other. For example, certain padi variety is combined with another variety to result into a new variety. The combination of two or more padi varieties done traditionally will get another variety with the character that is not much different from the parent/mother. Whereas with the modern GMO, these padi varieties are combined with the gene of plants not padi, or maybe with animals, virus, fungus, or human beings. The result will be another type of padi with the character or identity much different from the parents, or even far from what is expected by its creator. That is why almost all experts who are *concerned* with the problem of human being environment and health insisted on the application of the early precautionally principle

as is suggested by Protocol Cartagena. In other words the development and dissemination of organism as a result of GMO and its descendant should be done after a careful research and fulfill the scientific standard (pre clinic and clinic test). In this Protocol it is also stated that the transgenic product with no positive side effect from the point of health and environment, should not be thrown into the environment. A *risk management and risk assesment* (Kompas, 13 September 2000) should be done first. This means that producers should evaluate and take into consideration the possibility of negative side effects and how to overcome them. This should be anticipated when what is stated by Surapati (Fajar, 12 October 2002) that in 2007 there will be 157 million of transgenic plants in the whole world, is true. This means that an early prevention and precautions principle, have to be done because it concerns the world's safety.

It is understood that for food product a more serious requirement is expected because a food product that use GMO will more or less have a risk on its consumer life. Therefore before a product like this is put in the market there are several basic questions related to ethics and moral that should be answered.

The people who extremely doubt about the usefulness of GMO still question do human beings have the right to tinker God creation by creating other new organisms or organisms which have never exist before? Others are of the opinion that it is difficult to ensure whether food product like this really have any use to human beings. The writer is not going to answer this question. People who are involved in religious issues and ethics have the competence to answer the question.

The writer is concentrating on another question namely is the safety of the food product that make use of GMO already tested according to the rational testing process, in a long period of time and according to the standard of carefulness required by Cartagena Protocol, Food Act, SKB about the Biological and Food Safety and the regulation of Label and Food Advertisement? If the answer is yes, it means that the carefulness principle has been applied before the product is produced as a mass product and put in the market.

CONSUMERS RIGHTS AND ETHICS

Article 4. Consumers Protection Law (UUPK) stated 9 consumers rights. Out of nine, four have been mentioned very often in scientific meeting as well as in literatures. They are as follows:

- The right to safety product
- The right to choose
- The right to be informed
- The right to be heard

These four main rights are related to each other, and to moral and ethics.

Fuady (1994: 182) says that the right to Consumers Protection (HPK) is between Ethics and Economy Right. Patton (1952: 218) also notices that the principles of responsibility have to be based on morality in society. That is why it is not surprising if the lawyer's decision in countries, where the rights to Consumers Protection is highly developed, sometimes consider the things related to ethics like the necessity to be careful with both sides, the application of the principle of feasibility and good intention, and the protection principle to consumers with weak bargaining position.

Wahjono (Fuady, 1994: 195-197) has a different opinion about this. He looked at the Right to Consumers Protection (HPK) as a part of law with a cross sectoral character which is under several subsections of the law like Commercial Law, Law of Criminal Procedure, Civil Law, International Law, etc. According to the writer it is not surprising if explanation concerning food product that make use of GMO is always related to the Law in HAKI, namely Patent Law, Trade Mark Law, etc.

Going back to the four Consumers Rights, the Right to safety should be the main focus of food producers. European Countries are very keen on the application of these rights. This is shown by their rejection to milk and cheese that is suspected to come from cows injected with hormon from GMO (Kompas, 13 June 2000).

How about Indonesia? Apparently this feeling does not exist yet. For example, soybean imported from the US which is almost certain the result of GMO, is ignored by the Government. The data shows that 80% of US soybean product come from GMO seeds. This is never questioned by the

related agency (Kompas, 25 January 2003). This situation has been going on since the eighties. So it is almost certain that Indonesians have ever consumed, tofu, tempe, ketchup, etc., without realizing that they have consumed this kind of soybean because most soybean in Indonesia are imported from US. This shows that the consumer's right for safety and good information, is neglected by the producers in US as well as the producers, who produce products like ketchup, tempe crackers, soybeans juice, soybean milk, etc, and by the Indonesian Government. Infact in Article 13 of the Food Regulation (Regulation No. 7 1996) it is stated that producers who produce food using raw material, auxihary material and supplement material with GMO is to have the food safety like that examined. It is also stated that the Government should established the research requirements and principle, genetic modified method's development and use in the food product process and to establish a food test requirement resulted from GMO process.

In SKB of Animal and Food Safety it is stated that everyone/every organization that want to use the agricultural product produced by GMO (PPHRG) should submit an application of Animal and Food Safety to the Minister of Health (Director General of Food and Medicine Supervision) for the process of cattle, fish and plants transgenic and microorganic transgenic that is used as a substance in the food process (Article 37 subsection 1 item d).

Based on the application and evaluation that can report and recommendate to the Minister is done by Food Safety and Animal Safety Technical Team (TTKHKP). This report and recommendation can then be used to consider whether the application can be agreed on or not. The person or organization that got the green light from the Minister has to hand in a report every 12 months to the Minister (Article 44).

SKB also suggested that the use of food product as a result of GMO (PPHRG) has to fulfill the requirement for Animal and Food Safety and consider the religious, ethics, aesthetics and social cultural norm.

In Regulation No.69, 1999 (Regulations about Food, Label and Advertisement) it is stated that explanations about the ingredients used in food production process need to be stated in the

Label (Article 19). Further in Article 35 it is strongly stressed that on the food label that used raw material, auxiliary material and supplement material from GMO, should have the Label Food from GMO. This is also recommended for food that is not directly consumed by human beings, such as seeds and cattle food that will be consumed by human beings. Even in Article 58 b of Food Regulation (UUP) it is stated that the criminal sanction for businessmen (pelaku usaha) who violate the regulation about this kind of testing, is three years of prison and/or Rp.360.000.000 fine.

Are these regulation already put into practice? Not yet. This is shown by the protests of Non Governmental Organization (LSM) like YLKI, Komphalindo, Pesticide Action Network (PAN) and the protests from individuals. They asked the government to apply the food safety of GMO, among others by applying the regulation about labeling and intensive observation of this product.

YLKI (Kompas, 8 February 2002) has announced its invention: more or less 81 food product and its by product positively contain raw material, auxiliary material and supplement material which are the result of GMO. All products are put in the market without any discription on its label as suggested by Food Regulation and Regulation of Labeling and Food Advertisement.

Imagine how many violations have been done by businessmen in the food section. Particularly about soybean alone, starting from the US producers until the Decadent product (tempe, tempe crackers, soybeans, milk, ketchup, etc) producers, do not give any description to the consumers about the content of GMO.

The news in newspapers and magazines show that all the protest are not responded by producers/agencies in Indonesia. Moreover there is a tendency that the Indonesian Government will easily pass the GMO product without any proper test. This is proven by the Minister of Agricultural decree No. 107/Kpts/KB.430/2/2001 that allows the planting of transgenic cotton in seven kabupatens in South Sulawesi, eventhough there is protest from the Minister of Enviroment (Kompas, 18 December 2002).

Other law problem related to ethics is what was said by LIPI researches, BATAN, (Kompas, 21

June 2000) and the chairman of YLKI (Kompas, 13 June 2000) namely the application of a two-fold standard by the origin country government. Sometimes a product is not allowed to be consumed by the people from where the product comes from, but put in the market as human food in another country (developing country in particular). Or for the European market they do a proper test before it is put in the market, whereas for developing countries because the supervision is not good and they use a lower safety standard or in other words the test is simpler. This is very disturbing because the science and technology today can not tell what is going to happen in 10 – 20 years after man consume food like this. So the longitudinal impact can not be seen now. The example most often told was the invention of DDT some years ago, that was considered “human beings rescues” for starvation, harvest failure and malaria. What happened later was that the poison that resulted from DDT almost destroyed the bald hawk species in US. A residu of DDT was found in the eggshell of a hawk which enable the egg to be hatched.

The insincerity of the US Government is suspected when they issued the Bio Terrorism Act in the US. Base on this act the Government applied a very tight control on agriculture product and fishery imported from other countries, but on the other hand they are not strict in allowing the US agriculture product that will be exported to other countries (developing country inparticular). This is suspected as an effort from the US side to protect their product by using a *non-tariff barrier*. This is against the WTO agreement, where the main pioneer is US himself.

The producers of GMO food product seemed to make use of this opportunity in their respective countries because of the two-fold standard as well as in countries where their products are marketed, because of the weak law enforcement.

This is even worst if the producers try to avoid his responsibility by using the *state of the art*, the level of science and technology at the time production is done, which is not enable the producer to know the impact that will arise from it and will cause the consumers to lose.

The danger to human beings and enviroments will be bigger if it is true that in 2007 there will a 157 million hectare of land with transgenic plants.

(Fajar, 12 October 2002). We can imagine how big the impact will be if the application of test, control and food label regulations are not carried out.

According to *Consumers Association of Penang* (2002: 35) drugs test methodology done by the Pharmacy Industry which normally takes long and cost a lot of money, is done to a guinea pig and later to human beings. However, 13% of the new drugs that are found in the market can still not be detected whether they have a negative effect. Out of the 13%, 3% have to be withdrawn from the market because of the unexpected negative impact it has. The use of 10% of it has to be reduced because of its serious side effect

The test for transgenic organism is done in a relatively short time and on a few guinea pigs. Monsanto (a big company that produces many transgenic organisms) did a test on hormon bovin recombinan that is injected in cows to enable them to produce more milk, in only 90 days and in 30 mice. In fact this kind of testing normally needs minimally two years and uses at least hundreds of mice (standard test for cancer). However, a short test in a few mice already show a lot of impact on mice as well as on cows. But strangely enough Food and Drugs Administration (FDA) still give permission to use this hormon. The test by Monsanto that is given to FDA is not opened to public in order to do an independent scientific review because it was forbidden by FDA. The test for Roundup Ready Soybean (RRS) was only done on fish for 10 weeks, and a much shorter time on small number chicken, mouse and cow (*Consumers Association of Penang*, 2002: 36-37)

Based on this proof it is not surprising if the researchers from BATAN, LIPI and YLKI suspected that the two-fold standard is applied by the government of the transgenic food producer country.

Are the consumers opinion about the uncertainty of the product safety heard? From the mass media it is obvious that voices from LSM representing consumers get a proper respond from producer's or agencies in Indonesia. There is also a tendency that the Government let the GMO product easily go without proper testing. All the description above show how food and non food producers who make use of the transgenic technology have neglected the consumers Right to Safety Product, Right to right and honest

information, Right to Choose and Right to be Heard.

Other objections from those who studied GMO is the insertion of suicide seed or sometimes called terminator technology on food seeds which are produced. This means that farmers can not put aside a part of their harvest to be a seed because it can not grow. As a result every planting season farmers have to buy new seeds from the producer's. This makes farmers be dependent on the seeds producers.

The next law problem related to ethics and religion is the possible use/insertion of DNA from pig or other animals like dog in the food plant or cattle DNA. This can not be accepted by muslim consumers. That is why food producer's should put a clear information on the label so that the consumer's right to right and honest information and choice can be maintained.

Another right which is very important is the consumers Right to be Heard. Due to social, culture, education, etc., Indonesian consumer's in general especially in the field of food are very passive (or apathetic) (Abbas, 2002:238 etc). For this YLKI is in the right position to have a say to defend the consumers right.

The role of the Department of Religion and organization involved in the field of religion is very important in discussing and looking for reasons that can be used by the Government to take the right action to imported food product using pork and other forbidden (haram) animals in GMO Technology. It would be very wise if religious organization get the sympathy from the society to be involved in scientific and religious aspects.

Going back to the food product test using GMO technology, the government should immediately issued rules to implement this issue to enable people who are competent in testing do accordingly.

The Patent Act has to decide whether all the findings in the field of GMO can be made patent. For example, can human beings DNA that is inserted in a cow DNA and change its milk into ASI be made patent? That is why Indonesian Patent Act needs to be reconstructed to clarify which *invention* can be made patent, and not just based on *novelty*.

Eventhough the findings in the fields of GMO contains, novelty but if it is against ethics or the nation morality and religion, it is advisable not be made patent in Indonesia. Indonesians have suffered a lot in the socio-cultural field, so let other nations not dictate the moral aspects we own.

CLASS ACTION

Based on the fact that most of the food consumer's do not realize the possibility of hidden danger behind the food product (especially the imported ones) with raw material, auxiliary material and supplement material as a result of GMO, so the writer thinks that it is time for YLKI and other LSM to sue class action against businessmen in the food section who violate the regulation about label and food advertisement. If in the past the obstacle was the lack of regulation that arranged the class action mechanism, this can now be done by the party after the Regulations from the Supreme Court No.1, 2002 is issued. A lot of benefits can be gained when the businessmen who violated the law are sued. The most important thing is that the consumer's right to the safety of the product they consumed is maintained.

CONCLUSION

a. Conclusion

Unless the food product with raw material, auxiliary material and supplement material, which is the result of GMO fulfill the requirements concerning labelling, testing and supervision in Consumer Protection Act (UUPK), Food Act and the Regulation of Labelling and Food Advertisement, it can not be put in the market in Indonesia. However, in reality this law requirement is not yet done. As s result the test for this purpose has never been done by the competent institution in Indonesia.

b. Suggestion

Because the impact caused by food using GMO can be great, the government should immediately carry out the regulations related to the food testing and supervision. By doing this the consumer's rights (right to safety, right to get right and honest information, right to choose and right to be heard are maintained.

It is also advised that the government do not easily open a market in Indonesia for the food product from other countries taking in account, that very often the government of the food producer's country applied the two-fold standard: it makes it difficult to import food from other countries, especially from developing countries using *bioterrorism* as an excuse. On the other hand the government easily export its food product to developing countries even though it has not gone through the right test.

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