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Protection Of Farmers As Breeders Of Local Plant Varieties In Indonesia In The Perspective Of The Welfare State

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ABSTRACT

From the viewpoint of the welfare state, this study attempts to examine applicable worldwide and national regulations relating to protection for producers as producers of regional plant varieties. According to the study's findings, farmers' rights are disregarded by the Global Alliance for the Preservation of New Plant Varieties (UPOV). Articles 9, 12, and 14 of Law No. 12 of 1992 Regarding Plant Cultivation System, News stories 7 and 10 of Law No. 29 of 2000 Regarding Safeguards of Plant Varieties, as well as Opinion piece 9 of Law No. 4 of regard To the environment Signing of the Treaty of the Treaty on Plant Genetic Resources for Agriculture and Food do not reflect the idea of a welfare state because they do not take into account farmers' rights to financial gains from the advancement of agricultural technology. Farmers are protected by the International Convention on Plant Genomic Resources for Agriculture and Food (ITPGRFA) and the Committee on Biological Diversity (CBD), which both ensure that plant genetic resources will be used for food and agriculture and that variations will be preserved. Hope is offered by Publications 9 and 10 of Government Regulation Law number. 13 of 2004 Concerning Designation, Register, and Utilization of Genuine Variants for Making The necessary Derivative Varieties because they allow the government, which represents the interests of the people, to enter into advantage agreements with other parties who profit from regional varieties.

Keywords: Farmers' rights protection, welfare state.

INTRODUCTION

The goal of legal plant variety protection is to encourage and create chances for industry to play a larger role in all facets of agricultural growth. This is becoming more crucial given that government research organizations are still primarily responsible for developing high-yielding cultivars in Indonesia. In the future, it is hoped that the private sector can play a more active role so that more superior and more diverse plant varieties can be produced. According to the comprehensive theory of Law No. 29 of 2000 Regarding Plant Varieties Protection, this safety is not meant to limit small farmers' access to new variations for their personal needs while simultaneously preserving native plants for the advantage of the larger community.

Given the importance of the existence of plant breeders, the Indonesian government has enacted various laws, such as Law No. 4 of 2006 Regarding Ratification of the Convention on Plant Natural Assets for Food and Agriculture, Law No. 12 of 1992 Regarding Plant Cultivation Systems, Law No. 29 of 2000 Regarding Protection of Plant Varieties, and others (Wahyuni, 2013). However, it is still questionable whether the laws and regulations are consistent in protecting farmers' interests who are in a weak position both in terms of capital and technology.

The ability to produce plant varieties that can be used as superior, high-yielding seeds is very necessary because plant varieties are a factor that determines the quality of agricultural products. The advantages of the use of superior varieties include the use of inexpensive, high-technology plant varieties that do not pollute the environment. Through the use of superior plant varieties, it is hoped that the production process will be more efficient, more productive and produce high quality food ingredients

(Karama, 2000).

Legal protection is essentially an implementation of various international responsibilities to international law that must be carried out by Indonesia, especially those pertaining to the World Trade Organization's Trade Similar Copyright and Related Rights (TRIPs), that also, among some other things, mandate member nations, like Indonesia, to implement and impose statutes and rules and regs in the field of Copyrighted Works, the Global Agreement on the Protection of New Plant Varieties and the United Nations Agreement on Biological Diversity (BPHN, 2011, pp. 4–5). One of the international responsibilities under the instruments mentioned above that Indonesia must comply with relating to IP requires: First, member states to provide protection for new plant varieties; Second, to develop new discoveries in agriculture and to make the best use of Indonesia's wealth of biological resources to assemble superior varieties to support economic development; Third, fourth, to promote and create possibilities for the corporate world to grow in the agriculture sector; to reward businesses or individuals that engage in plant breeding for their efforts in producing superior plant types, provide a legal basis for attempts to create new superior varieties and develop the plant seed industry (Barizah, 2009).

Farmers who produce new plant varieties, including local plants, shall be given legal protection and have their related rights (farmers' rights) recognized and fulfilled, such as economic rights as a consequence of economic use or utilization of their varieties, either by themselves or by other parties through licensing agreements. Utilization of economic value for creations that produce local plant varieties is correlated with efforts to improve the welfare of community members (especially farmers), so that the concept of a welfare state as adopted by Indonesia can be materialized.

The description above begs the following questions as the formulation of the problem of this article: First, how is the protection of farmers as plant breeders based on national and international law? Second, how is the utilization of economic value of creations that produce local plant varieties in the perspective of the welfare state?

ANALYSIS

Protection of Farmers As Breeders According to National and International Law

The implementation of the responsibility of the state (in this case, the government) can be done through several actions and policies such as drafting, passing, and enacting legislation aimed at improving the welfare of its people, including the protection of "creations" through intellectual property, such as patents and plant varieties. The Patent Law No. 13 of 2016 Concerning Patents protects the process for making or producing plants using biotechnological techniques but does not provide protection for plant variety products. Therefore, to protect the new plant variety products, it is necessary to enact a subgeneric (separate) law.

Why Law No. 29 of 2000 Regarding the Protection of Plant Varieties was passed (herein after referred to as the Plant Varieties Protection Law) are: First, to carry out international obligations the result of Indonesia's membership in the World Trade Organization (WTO). As a result of this membership, Indonesia must adjust its national law so that it does not conflict with the laws or regulations that are decisions that the International Trade Organization has made. One of the obligations that Indonesia must comply with relating to intellectual property is to offer safeguards for novel plant species; Second, to encourage new discoveries and inventions in the field of agriculture and to make the best use of Indonesia's wealth of biological resources by creating superior varieties to support economic development; Third, to encourage actions that result in better plants by giving awards to business entities or individuals engaged in plant breeding; and fourth, to encourage and provide the corporate world opportunity to develop in the agricultural sector, provide a legal basis for efforts to create new superior varieties and develop the seed industry. Based on the second, third, and fourth reasons, it can be concluded that the Plant Varieties Protection Law aims at encouraging plant breeders to develop new varieties that are superior and have certain characteristics that

will improve food security and management of agricultural resource diversity, as well as improve the welfare of plant breeders, especially farmers.

Protection of local plant varieties is becoming more important than ever to meet food needs due to population growth, limited land, water stress and agricultural inputs; the invasion of new superior seeds into farm management; and the development of technology and farm management. Lack of protection for local plant varieties will result in the local plant varieties being 'cornered', causing them to die out (BPHN, 2011, p. ii).

The urgency of protecting new local plant varieties in relation to agricultural and scientific development is: first, a clear legal defense for the discovery of novel plant species and their breeding methods will have a profound effect on the development of the farming industry in Indonesia, as this will encourage plant breeders to continue conducting research in order to find new varieties of plants; and second, this legal protection is also needed to anticipate the development of science, especially in agriculture related to genetic engineering. In South Sulawesi, Mon Agro, a multinational company in the field of agribusiness, conducted a trial to breed a genetically modified cotton plant (a transgenic plant or genetically modified plant) which turned out to have an undesirable environmental impact. The Republic of Indonesia's Minister of Agriculture's Decree No. 107/KPts/KB/430/2/2001 is too hasty in granting planting permits for transgenic plants while an environmental impact analysis has never been carried out. This is in contrast with practices in several developed countries where the planting of these transgenic plants is prohibited. This decree should not have been issued before research on the impact of transgenic plants has been conducted (Yuliati, 2003).

The Office for the Protection of These Rights (hereinafter made reference to as the PVP Office) implements the Plant Cultivars Protection Law's Article 1 Paragraph (1), which states that the state—in this case, the government—grants special protection for plant varieties. The PVP Office safeguards plant varieties developed by breeding programs through plant biotechnology activities. The state grants breeders and/or PVP rights holders a special right to use their own varieties or grant permission to certain other persons or legal entities to use them for a specific amount of time. This protection is provided in the shape of the Vegetation Cultivars Safeguard correct (hereinafter referred to as the PVP right) (Article 1, point 3). A cluster of plants of a sort or organisms is referred to as a "plant variety" if they exhibit the same genetic markers qualities or gene mutations combos that really can differentiate them from other plants of the same type or organisms by at least one trying to define characteristic and do not change if they are reproduced (Article 1, point 4), This indicates that the variety maintains its stability during seed propagation or with the use of certain methods of propagation, such as tissue culture and the creation of hybrid seeds.

Plant varieties that can be protected include those from newly discovered, distinct, recognizable, enduring, and named plant species (Article 2). When a PVP rights application is submitted, a variety is deemed to be new if its propagation material or yield has never been traded in Indonesia, has only ever been traded for a short period of time, or has only ever been traded abroad for a maximum of four years for seasonal crops and six years for annual crops. If a variety can be easily recognized from others whose existence was generally known at the time the PVP rights application was filed, it is deemed to be unique. If the primary or most distinguishing characteristics of a variety are shown to be consistent, notwithstanding variations brought on by various planting techniques and environmental conditions, the variety is said to be uniform. When a variety is propagated through a certain cycle of propagation, its traits must not change at the conclusion of each cycle in order for it to be deemed stable. In this sentence, "unique propagation cycle" refers to the pattern of propagation used for hybrid plant types, tissue culture, and cuttings from leaves or stems.

Varieties that can be given protection must be named. In principle, this name aims at providing the identity

of the characteristics that exist in the variety, and this name will be attached to the variety as long as it exists. Then, that name then becomes the name of the variety in question, provided that the following conditions are met: a. the name of the variety may be used even after the protection period has ended; b. naming must not lead to confusion regarding the characteristics of varieties; c. the naming of the variety is done by the applicant for PVP rights and registered with the PVP Office; and d. if the naming does not comply with the requirements of point b, the PVP Office has the right to reject the application.

The permanence of the traits in plant variations is what makes plant variety protection unique, although this sui generis system of protection basically has similarities with general patent provisions (Imanullah & Purwandoko, 2013). Protection of plant varieties granted to plant breeders is based on Article 27 paragraph (3) point (b) of the TRIPs Agreement. In particular, this provision is covered in the fifth part of TRIPs, which regulates superior varieties in agriculture and has high economic value without neglecting the use of such novel plant kinds to promote community well-being (Yuliati, 2003, p. 19). The purpose of plant breeding is to develop varieties that are better than existing ones (Moeljopawiro, 2011).

The definition of variety in general is similar to the definition of variety as described in Law No. 12 of 1992 Regarding Systems for Growing Plants (hereinafter referred to as Plant Cultivation System Law), with the addition of an explanation of the nature of the genotype or combination of genotypes as one of the basic character elements that differentiating between different plant varieties. The order of genes that results in a certain feature is known as a genotype. An assessment is carried out either on one or several of the properties or characteristics of the plant concerned. What is meant by a variety which, if propagated, does not change is that the variety remains stable in the process of seed propagation using specific techniques, such as the creation of hybrid seeds, cell cultures, and cuttings. Whereas what is meant by "varieties of plant species that can be granted PVP rights" are all varieties of plants, including generative and vegetative kinds, with the exception of bacteria, bacteroid, mycobacteria, viruses, viroids, and bacteriophages. Sexual propagation is the propagation of plants through the reproduction of reproductive cells, while vegetative propagation is the propagation of plants without the reproduction of reproductive cells.

PVP requirements, i.e., novelty, unique, uniform, stable, and name, are considered to be the main causes of the use of technological monocultures. Meanwhile, provisions in the Plant Cultivation System Law that emphasize the large government control function in planting patterns and methods, plant types, seed types to be planted, and other seed regulations have a significant impact on the use of technological monocultures. This also has the potential to erode resource diversity, although it is not the main cause. Such conditions have the opportunity to encourage the privatization of genetic resources (Barizah, 2009).

According to Article 3 of the Plant Varieties Protection Law, plant species that aren't specified Types covered by PVP rights law are those whose usage is against the rules and laws now in effect, public order, morality, religious norms, health, and environmental sustainability. Plant varieties whose use contradicts laws and regulations, Psychotropic-producing plants are part of public order, safety, morality, and the living environment, while those that violate religious norms include varieties containing genes from animals that contradict the teachings of certain religions.

According to Article 4 of the Plant Varieties Protection Law, seasonal crops enjoy 20 years of PVP rights protection, while annual crops enjoy 25 years of protection. Annual plants include types of trees and vines whose production period is more than one year; otherwise, a plant is categorized as a seasonal plant. The protection period begins at the date of granting the PVP rights. Applicants are given temporary protection from the day they have completed the submission of application for PVP rights up until the day the PVP Office issues the PVP rights certificate. During the period of temporary protection, applicants get protection for the use of

varieties.

Protection schemes for local plant varieties can also be carried out through conservation mechanisms and sustainable use of plant genetic resources for food, which includes local plant varieties. In this regard, Indonesia's membership in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), initiated by the Food and Agricultural Organization (FAO), which was ratified through Law No. 4 of 2006, as well as the ratification of the Convention on Biological Diversity through Law No. 5 of 1994, provides greater protection for the protection of local plant varieties. The National Commission for Genetic Resources (KNSGD) has been established as a form of implementation of these instruments. This commission's programs include: formulating a national strategy to reserve, evaluate, utilize, and preserve Indonesian germplasm in particular and other economies in general; determining the priority to be handled by the germplasm based on the threat of genetic erosion, its potential value, and its importance in food diversification, especially in the direction of research on its use for breeding; formulating a national germplasm production system; and monitoring the utilization and preservation of germplasm stored or managed by various government agencies or non-governmental organizations (BPHN, 2011, pp. 77-78).

The varieties created through genetic engineering can also be protected by PVP rights as long as the registrant or applicant provides a thorough description of the variety that details its molecular characteristics, the genetic stability of the proposed trait, the presence of wild relatives, the presence of substances that could disturb the stability of the environment and human health, and the method of destruction if deviated from. However, the Plant Variations Preservation Act is ambiguous on the PVP protection of varieties created employing technological terminators (Barizah, 2009). Implementing PVP rights protection for plant breeders has challenges (Hariyanto, 2008). First, there are normative restrictions, which treat PVP rights as intellectual property rights that can be protected on transportable but intangible goods. The right of the breeder to safeguard their plant types is not explicitly stated by the legislation, nevertheless. In order to fully clarify the Law No. 29 of 2000's requirements on the protection of plant types, an implementing rule is necessary. Next, there are political limitations. Due to their own interests in the varieties, they generate, several organizations and areas may not wish to register these varieties in order to receive PVP rights. Third, there are financial limitations. The expenses involved in acquiring PVP rights protection are not minimal. Plant breeders are being discouraged from developing new varieties because of this and the drawn-out procedure. There are also psychological restraints. Plant breeders are not aware that registering their varieties would preserve their PVP rights.

Utilization of Economic Value for Creations Producing Local Plant Varieties in the Perspective of Welfare State

The rule of law means that every citizen has rights and obligations under the law, is obliged to uphold the law, and is guaranteed legal protection without exception (Wartoyo, 2016), so that the government in exercising its power must be based on law and justice (Syafe'i, 2011).

A welfare state adheres to the principles of liberty, equality, fraternity, and mutuality (Syafe'i, 2011). According to Friedman, in the economic sector, there are four functions of the state, namely as a guarantor and provider of people's welfare, as a regulator, as an entrepreneur by or running certain sectors through state-owned enterprises, and as the umpire to formulate fair standards regarding the economic sector, including state corporations.

The foundation of the welfare state was first proposed by Jeremy Bentham (1748–1832) in the 18th century. Bentham argued that governments had a duty to secure the greatest welfare (or happiness) for the greatest number of its citizens. Bentham refers to the idea of happiness or well-being as "utility" (Sukmana, 2016, pp. 103–122).

The term "welfare state" generally refers to the state's involvement in the management and organization of

the economy. This involvement includes the state's obligation to guarantee that its citizens have access to basic social services at a specified level. Generally speaking, a nation may be categorized as a welfare state if it possesses the following four basic components: social citizenship; complete democracy; contemporary industrial relations systems; and the spread of modern mass education systems. Because a welfare state views the implementation of social programs as the provision of social rights to its inhabitants, these four pillars are made feasible. These social rights, which are protected by law, Property rights, for example, are provided based on citizenship rather than performance or class and cannot be infringed or are inviolable (Sukmana, 2016, p. 114).

In general, a welfare state must adhere to the following four principles: (1) Social Rights in a Democratic Country; (2) Welfare Rights; (3) Equal Opportunity for Citizens; and (4) Balancing of Public and Economic Power and Economic Effectiveness. The objectives of the development of the Republic of Indonesia are pertinent to and consistent with the four main principles of the welfare state (Sukmana, 2016, p. 114). As required by the 1945 Constitution, the Unitary State of the Republic of Indonesia is a welfare state, which means that every citizen's welfare and a basic quality of living must be guaranteed by the state.

Plant breeders, people, businesses, and other parties who have received PVP rights from prior PVP rights owners are the holders of PVP rights. Breeders, in the process of plant breeding activities, can work alone, or together with other people, or work in the framework of orders or work agreements with individuals or legal entities. As the creator or producer of the variety, the breeder has an inherent right to the PVP rights of the variety concerned, it includes the obligation to have his or her name included and the option to be paid. A person or legal body who obtains the transference of rights from the prior PVP rights holder is someone who also receives PVP rights. The owners of PVP rights do not have any rights pertaining to breeders, namely the inclusion of names (moral rights) and the right to receive compensation (economic rights).

To increase the benefits of protecting local plant varieties, both for the benefit of the government, farmers, and food security of the community, it is necessary to support the provision of appropriate compensation for local plant varieties used to develop essential plant varieties, which can be done by registering local plants in a database that reflects the wealth of natural genetic resources. Ideally, it is supported by laws and regulations regarding the management of genetic resources, from the legal level to the level of implementation (BPHN, 2011, p. 78).

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and CBD (Convention on Biological Diversity) regimes better support the preservation and self-sustaining use of plant breeding for food and agriculture, thereby guaranteeing the rights of farmers to raise their standard of living and general welfare. Local plant varieties, which are connected to the interests of farmers, are less protected under the UPOV (The International Union for the Preservation of Novel Varieties of Plants) system, which defends the interests of the breeding industry (BPHN, 2011, p. 78); therefore, this instrument is not in line with the Indonesian government's policy to increase the equitable distribution of welfare for all citizens.

Law No. 29 of 2000 does not elaborate on farmers' rights, but internationally, the understanding of this definition is contained in FAO Resolution 5/1989, which was refined by FAO Resolution 3/1991 and FAO Resolution 3/2001 concerning Plant Genetic Resources. These resolutions define farmers' rights as:"... Farmers have the right to compensation for their past, present, and future contributions to the preservation, enhancement, and expansion of plant genetic resources, particularly those in geographic regions of origin and variety. Briefing Papers on the Convention on Biological Diversity, n.d. In other words, farmers' rights that arise from farmer contributions, considering that in the past, present and future, farmers are community groups that have conserved, developed and made genetic resources available that are now understood, particularly those

at the heart of plant diversification,

Three crucial factors must be taken into account, according to Article 9 of the International Treaty on Plant Genetic Resources for Food and Agriculture. First, the parties to this agreement will keep protecting and advancing the plant genetic resources that form the cornerstone of global agriculture and food supply. Second, it is the national government's role to implement farmers' rights in relation to genetic resources for food and agriculture. Each party to this Agreement shall, in accordance with its national laws and regulations, take steps to protect and promote the rights of farmers, including: a. the protection of traditional knowledge relating to plant genetic resources for food and agriculture; b. the right to obtain a proportionate share of profits resulting from the use of plant genetic resources for food and agriculture; and c. the right to participate in national decision-making regarding such matters as: how to use plant genetic resources for food and agriculture. Third, Both parties agree not to restrict farmers' ability to save, use, trade, and sell seeds and other crop-related materials as long as they do so in conformity with relevant national laws and regulations (BPHN, 2011, pp. 37-38).

The Plant Varieties Protection Law has accommodated the rights of plant breeders to obtain legal protection as stated in Article 1 Point 4: "Plant breeding is a series of research and testing activities or activities of discovery and development of a variety, in accordance with standard methods to produce new varieties and maintain the purity of the resulting variety seeds." However, based on the article, farmers' rights to local plant varieties are not explicitly protected because producing new varieties must be done through research and testing or discovery and development activities of a variety, which are unlikely to be done by farmers due to the difficulty. Thus, the breeding process carried out by farmers in developing varieties that is not based on research and not in accordance with standard methods will not be considered as plant breeding based on the provisions of the Plant Varieties Protection Law. Despite the fact that locally based plant breeders may generate new types from indigenous plants created by farmers, the Plant Varieties Protection Law does not explicitly require these plant breeders to provide compensation to the farmers who developed and own the original plants. On the contrary, farmers who actually develop their own plant varieties for commercial purposes (Article 10 paragraph (1) point (a)) are open to liability and might be sued for violating the rights of plant breeders because they are considered to be using them without their consent. On the other hand, if plant breeders use protected types of farmers According to Article 10 Paragraph (1) Point (b) of the Plant Kinds Protection Law, it is not regarded as a violation when done for study, plant breeding, or creating new varieties. These rules do not adhere to the idea of a welfare state, where each person is guaranteed the rights to liberty, equality, fraternity, and reciprocity (21Ja).

The broad scope of plant breeder rights , as stipulated in Article 6 of the Plant Varieties Protection Law, results in farmers only getting the right to use as long that they are not used for commercial purposes, a portion of the crop from protected kinds, meaning only for the needs of the farmers themselves but not for sale to other parties. However, it is not a violation of the Plant Varieties Protection Law in the case of farmers who are used to exchanging seeds as long as the seeds exchanged by farmers are not seeds protected by the Plant Varieties Protection Law and are not seeds of new varieties purchased in the commercial market. This condition has proven to be dilemmatic for farmers, because if farmers maintain they might not benefit from the advancements in agriculture provided by seeds covered by the Plant Varieties Protection Law, which would lead to inadequate competition for conventional seeds (Barizah, 2009).

Local varieties are those that have been grown by farmers for many years, are owned by the state and managed by the community. State control is carried out by the government by regulating matters such as the right of return, the use of variety in relation to protection of plant varieties, as well as efforts to conserve germplasm. The government is obliged to give names to these local varieties, and when

referring to the designation of regional variants, it is important to focus on the naming rules associated with description, origin, and location. The provisions for naming, registering, and using local varieties, which include, among other things, ownership and regulation of economic benefits for the local variety owners, as well as the agencies assigned to implement them, will be subject to more government regulation.

Government Regulation No. 13 of 2004 Concerning Registration, Naming, and Use of Original Varieties for the Production of Essential Derivative Varieties sets the following requirements for the naming of local varieties, where the name must: a. reflect the identity of the local variety concerned; b. not cause confusion in the characteristics, value, or identity of a local variety; c. not have already been used for the name of an existing variety; d. not include a famous person's name; e. not use the name of a natural or geographical feature; f. not feature the national emblem, and/or; g. not use trademarks for goods and services produced from propagation materials such as seeds or seedlings or materials produced from other varieties, transportation services, or plant rentals.

Every person or legal entity that is planning to use a local variety as the original variety for the manufacture of essential derived varieties is required to make an agreement in advance with the Regent/Mayor, Governor, or PVP Office representing the interests of the community that owns the local varieties concerned. The agreement may include compensation for the community that owns the origin varieties obtained from the essential derivative varieties whose basic ingredients are sourced from local varieties. If the agreement provides for compensation for the owner of the origin varieties, the compensation is used for the following purposes: a. improving the welfare of local variety owners; b. conservation of the local varieties in question; and efforts to conserve germplasm in the area where the local varieties are located. The Regent/Mayor, Governor, or PVP Office, representing the interests of the local variety owner, shall implement and monitor the usage of the compensation. In the case of essential derived varieties whose original varieties originate from local varieties, PVP rights applications will be requested at the PVP Office. In addition to a copy of the agreement, other documents required for PVP rights applications must be attached.

This claims that the government serves as a controlling authority over plant variety seeds and guards against the exploitation of regional plant variations. Local populations that have created these plant species, nevertheless, could oppose overbearing government regulation. Such control can be justified in accordance with the premise that states the government has sovereign rights over the resources on its territory. However, such provisions might be at odds with the International Treaty for Plant Genetic Resources for Food and Agriculture's principles of farmer rights, the Convention on Biological Diversity's efforts to give local farmers and the community more control over biological resources, and the Bonn Guidelines (Barizah, 2009). Therefore, even though the safeguarding of plant varieties does not aim to close the window of opportunity for local farmers to use different flavors for their reasons, in practice the provisions are contained in the Plant Cultivars Protection Act have the potential to limit farmer's opportunities to develop new variants (Barizah, 2009), limiting farmers' ability to take advantage of economic and social rights to enhance their living standards and welfare.

According to Article 6 paragraph (1) of the Plant Cultivation System Law, farmers have the freedom to determine the choice of plant types and their cultivation, but Article 6 paragraph (3) then continues, "If the farmer is not free to choose the type of plant and its cultivation, it means that the government obliges the farmer for the type of plant and its cultivation that has been determined by the government, then the farmer concerned gets a certain income guarantee," referring to income compensation given because the farmer does not achieve a certain minimum level of income that he/she could have otherwise obtained. Therefore, the policy essentially guarantees the survival of farmers

to meet their economic needs.

The Plant Cultivation System Law regulates seedlings, which is the development of plant cultivation, where the acquisition of seeds can be carried out through the discovery of superior varieties or seeds originating from abroad. This law also stipulates that to be distributed, seeds must first go through certification and meet the quality standards set by the government. Seeds that have passed the certification must also be labeled. The provisions regarding seeds above aim at developing a strong agricultural sector and also developing the seed industry, but ironically, the Plant Cultivation System Law does not recognize the existence of seeds that are developed conventionally by farmers. Furthermore, the system stipulated in this law closes the possibility for farmers to be able to use self-developed seeds because farmers must comply with government programs and regulations. This system also closes the possibility for farmers who usually sell, distribute, or share their seeds with fellow farmers, because they now have to meet requirements that are impossibly difficult for farmers to fulfill (Barizah, 2009). Provisions on seeds in the Plant Cultivation System Law are substantially inconsistent with the regulation on the freedom of farmers to determine the choice of plant types and their cultivation.

According to Nurul Barizah, some of the obstacles to implementing the Plant Varieties Protection Law, the Patent Law, and the Plant Cultivation System Law in their relation to farmers' rights are as follows (Barizah, 2009):

a) This legislation rewards seed companies for developing seeds of superior quality or with certain characteristics that may threaten the existence of local varieties. Agronomy is considered a field that is substantially different from other technological fields because farmers usually use and store seeds from their crops, so accelerated commercialization is not profitable for farmers in developing countries. At the international level, individual ownership of inventions through intellectual property has been implemented, while the state maintains control of key resources.

b) Intellectual property has the potential to bolster agricultural production, but control by farmers, private companies, and the state over genetic and biological resources has become controversial with the application of intellectual property to crop varieties. On the contrary, at the national level, although the role of farmers in conserving and sustaining agricultural resource diversity has generally been recognized, it is not linked to specific farmers' rights claims to resources or knowledge.

c) In general, the Plant Varieties Protection Law tends to facilitate control over seeds and knowledge by agribusiness companies, resulting in farmers' having to pay higher royalties for obtaining seeds as well as farmers' dependence on seed availability. In addition, farmers are also limited in their rights related to saving seeds, replanting seeds, and selling stored seeds. Regarding the enforcement of intellectual property in developing countries, plant variety protection is often supported by obligations under contract law. Thus, giving rise to the application of technology related to the use of genes that must be used by farmers.

d) The challenge of strengthening intellectual property in agriculture also raises problems related to the right to food as a result of globalization in agriculture. FAO notes that globalization has a number of positive impacts but at the same time has the potential to weaken poor farmers with regard to development of mechanisms to accelerate the transfer of varieties for food security.

Several countries have provided proportional and balanced protection between the rights of breeders and farmers' rights. India, for example, provides protection for the rights of breeders and farmers' rights in one law. India refers to UPOV in fulfilling its breeders' rights; as for farmers' rights, it designs its own according to its culture and agricultural needs. India recognizes farmers' rights as part of intellectual property. This concept contradicts the

common perception that farmers' knowledge is traditional and is part of a common heritage, and therefore cannot be protected by intellectual property. This recognition is manifested in the determination of profit sharing and compensation for farmers for their role as conservators and protectors of their traditional rights. This recognition is manifested in the determination of profit sharing and compensation for farmers for their role as conservators and protectors of their traditional rights. In fact, this Indian law clearly stipulates that the privileges granted to these farmers are considered rights. According to Section 39 (IV) of this law, farmers must be considered to be entitled to store, plant, replant, exchange, distribute or sell products originating from their land, including seeds of varieties protected in this law by means that are similar to what they were entitled to before the enactment of this law. However, farmers are not entitled to sell branded seeds of a variety protected under this law. Section 42 (1) of this law also provides protection for unintentional infringement where it is stated that a right stipulated in this law shall be deemed not to be violated by a farmer who, at the time of the violation, was not aware of the existence of such a right. Furthermore, the law also expressly prohibits the registration of varieties that involve technology that endangers human, animal, and plant life. Included in this technology category is Genetic Use Restriction Technology (GURT), or "technology terminator" (Barizah, 2009).

An example of a case study is the case of Kunoto a.k.a. Kuncoro, a corn seed breeder-farmer in Toyo Resmi Village, Ngasem District, Kediri Regency, East Java. He is a member of the Bina Tani Makmur farmers' group and has been accused of crossing and cultivating corn seeds without the consent of PT. BISI as the owner of the seeds, in violation of the Plant Varieties Protection Law. According to Article 3 of the law, corn seeds are protected by PVP rights because their use is not in conflict with applicable laws and regulations, public order, morality, religious norms, health, and environmental sustainability.

The Plant Kinds Protection Law supports the advancement of contemporary biotechnology, which uses genetic engineering to create new varieties. However, it does not offer protection for farmer-developed traditional varieties since it is challenging for farmers to achieve the consistent and stable standards imposed by the Plant Varieties Protection Law (Barizah, 2009).

The application of the concept of the welfare state regarding farmers as plant breeders is the use of local varieties by other parties through benefit sharing agreements as regulated in Articles 9 and 10 of Government Regulation No. 13 of 2004 Concerning Registration, Naming, and Use of Original Varieties for the Production of Essential Derivative Varieties. Every person or legal entity that is planning to use a local variety as the origin variety for the manufacture of essential derivative varieties is required to make an agreement in advance with the Regent/Mayor, Governor, or PVP Office representing the interests of the community that owns the local varieties concerned before a notary. The Regent/Mayor, Governor, or PVP Office representing the interests of the local variety owner shall implement and monitor the usage of the compensation but must provide access for the community (farmers) to be involved in the management, use, and preservation of local plant varieties so that the rights of farmers and the community are guaranteed.

CONCLUSION

Local plant varieties have insufficient protection under international regulations for the preservation of plant varieties, including such UPOV (The International Union for the Protection of Novel Varieties of Plants), which ignores farmers' rights and prevents an increase in their welfare.

National provisions such as Articles 9, 12, and 14 of Law No. 12 of 1992 Concerning Plant Cultivation System, Articles 7 and 10 of Law No. 29 of 2000 Concerning Protection of Plant Varieties, and Article 9 of Law No. 4 of 2006 Concerning Ratification of the Treaty on Plant Genetic Resources for Food and Agriculture do not reflect the concept of a welfare state because they do not explicitly mention and cater to the rights of farmers who produce high-quality local plant varieties according to the criteria of the

laws and regulations.

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) and the Convention on Biological Diversity (CBD), two international agreements pertaining to genetic resources and biodiversity, guarantee the interests of protection and conservation of regional plant varieties through the preservation and sustainable use of plant genetic resources for food and agriculture.

Furthermore, Articles 9 and 10 of Government Regulation No. 13 of 2004 Concerning Registration, Naming, and Use of Original Varieties for the Production of Essential Derivative Varieties bring a positive hope because the government representing the community concerned can make benefit-sharing agreements with other parties using local varieties so that they can support efforts to materialize the concept of a welfare state.

An Amendment to Law No. 29 of 2000 Concerning Protection of Plant Varieties is required to protect farmers' rights as an effort to materialize the concept of a welfare state. This amendment is done with the intention of harmonizing the interests of plant breeders and farmers' rights so that farmers who are weak in terms of technology and capital can be able to take part in maximizing the economic value of local varieties. In addition, Law No. 12 of 1992 Concerning Plant Cultivation Systems needs to accommodate the development of seeds so that they are of high quality and have the potential to produce local plants that are protected by PVP rights. This needs to be supported through government policies that are comprehensive in nature to realize the concept of the welfare state from both juridical and non-juridical perspectives, such as cultivating a creative culture in the community or encouraging farmers to develop local plants that have the potential to receive legal protection and have high economic value.

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