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AN OVERVIEW OF REGULATORY FRAMEWORKS FOR GENETIC ENGINEERING AND PLANTS VARIETIES IN NIGERIA

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ABSTRACT
The rise in use of biotechnology comes with its accompanying wave of problems that affect almost every fragment of the human life. Suffice to say, the results of those innovations have great bearing with respect to their protection as *"property rights"*. With development in many indispensable state-of-the-art equipment, there have been consequential innovations, advantageous mutations and varied explorations in diverse fields of human endeavor, which, to say the least, are methodological based and solution oriented. The reality of these innovations informs a corresponding need to protect various sorts of property rights, either via the grant of patents, copyrights, trademarks or industrial designs and in specific context pertaining to this discourse, plant breeders' rights. Employing the use of doctrinal research methodology, the focus of the ensuing discourse is targeted towards navigating the regulation of genetically engineered plants and plant breeding in Nigeria, whilst taking into consideration applicable regulatory frameworks relevant to the subject under view (international and domestic legal frameworks). Using the public interest theory, the research explores how the regime of the Plant Variety Protection Act, 2021 has brought increased development in the Nigerian agricultural landscape, obviously for public benefit. The paper further examine the strengths and lacunas inherent in the Nigeria Plant Variety Protection Act, 2021. As part of its findings, the discourse establishes that paucity in awareness of the laws regulating the industry and recommends the need for robust information dissemination and fortified implementation mechanisms/collaborations to ensure the intended objective of the Act is realized and impact maximized to impart the Nigeria's economy.

Keywords: Genetic Engineering, Plants Varieties, Public Interest Theory, Seeds, Breeder's Rights.

INTRODUCTION

Need for increased food security, reduction in agriculture-related pollution, development of sustainable sources of energy; sustainable agricultural practices and related benefits were the benchmarks necessitating stakeholders in the agricultural sector, with the backing of the legislature to develop a framework addressing plant breeding rights in Nigeria. Signed in May 2021 by President Mohammadu Buhari, the **Plant Variety Protection Act,** heralds the beginning of a regulated plant breeding practice in Nigeria. The thrust of the framework is for the protection of plant varieties, encouragement of investment in plant breeding and crop variety development, and the establishment of Plant Variety Protection Office for the promotion of increased staple crop productivity for smallholder farmers in Nigeria.

As the largest growing economy in Africa with a population of over 200 million people[1], agriculture contributed about 28.65% to the nominal GDP of the nation in the third quarter of year 2024[2]. Importantly,

[1] Worldometer, "The Current Population in Nigeria", available at <htpps://www.worldmetwres.info/world-population/nigeria-population/#> accessed on 11th February, 2025.

[2] Businessday, 'Services, Industry, Agric, Fuel Nigeria's Growth in Quarter 3',

Nigeria's agricultural sector is said to comprise four sub-activities: crop production, livestock, forestry and fishing with crop production as the dominant player, making up 88.06% of the sector's overall nominal value. [3].

Nigeria's growing population and its implications for economic development makes the country a leader in Sub-Saharan Africa. The country is a prime destination for foreign investments; attracting scientists, breeders, farmers, and other agriculture stakeholders. According to the National Agricultural Seeds Council,[4] there are 157 registered seed companies in Nigeria, with the majority producing fewer than 1,000 metric tons of seeds annually. The Seed Entrepreneurs' Association of Nigeria is the country's main private seed trading body, with approximately 67 registered members. The new legislation thus commercializes seeds and propagate material and as such it is hoped to encourage national and multi-national investments in the Nigerian agricultural/seed sector[5].

THEORETICAL FRAMEWORK

The adapted theoretical framework used for this study, is the public interest theory. The elements of this theory though traceable to Pigou, was very much expanded by Max Weber[6]. The theory posits that government regulations, law and policies are made with a view to benefitting the general public and society. It is a theory commonly used in economics[7], politics and public policy and it is to the effect that government decisions and policies should be guided by the interests of the general public, rather than by the interests of specific individuals, group or corporations. The key principles of public interest theory are: serving the greater good, promoting social welfare, protecting vulnerable groups, encouraging transparency and accountability. In tune with the subject focus, the Plant Variety Protection Act, 2021 was undoubtedly one of such laws made with the aim of expanding the frontiers of the Nigerian agricultural sector in line with best global practices and for the interest of the Nigerian people. Creation of visibility for plant breeder's in the nation and the recognition of plant breeder's rights, explicates a policy that is geared towards serving the greater good and more-so, protecting the values and ideals that makes for a vibrant agricultural industry. The fund as provided in the Act, shows intentions in ensuring the Seed and food industry in Nigeria is empowered and sustained to enable increased staple crops production, lead development in disease resistant, drought-resistant and high yielding varieties to support the Country's crop production. Also, the implementation of the law would drive value for Nigerian local farmers and propel socio-economic development of the nation.

NATURE AND MEANING OF GENETIC ENGINEERING AND PLANT VARIETIES

Genetics Engineering is the process by which geneticists, shift, delete, add or rotate genes. Specifically, plant breeders often seek to produce in plants a resistance to pests, more succulent taste, larger or more nutritious fruits and resistance to disease. This process results in organisms commonly referred to as genetically modifies or genetically engineered species[8].

J.S Robert and F. Baylis, described the process of genetic engineering as comprising multiple techniques for the intentional manipulation of genetic material (primarily deoxyribonucleic acid or DNA) to alter, repair or enhance form or function[9]. Eugene Rosenberg, postulates that genetic engineering is also called recombinant DNA technology, which involves the group of techniques used to cut up and join together genetic material, especially DNA from different biological species, and to introduce the resulting hybrid DNA into an organism in order to

https://www.google.com/amp/s/businessday.ng> accessed on 11th February, 2025.

[3] Stephen Angbulu, 'Nigeria's Livestock Contribution to GDP Lags Despite 156 Million Cattle' <https://punchng.com/nigerias-livestock-contribution-to-gdp-lags-despite-156-million-cattle/?amp> accessed on 28th November, 2024

[4] The NASC was established in December, 2007 as an Agency of the Federal Ministry of Agriculture and Rural Development in line with the provisions of the national agricultural seeds act no. 72 of 1992.

[5] USDA Report, Government of Nigeria signed Plant Variety Protection Bill, by Ebenezer Boluwade, June 23rd, 2021, Report No. N12021-0005, p. 2.

[6] Wikipedia, '**Public Interest Theory'**, available at <https://en.m.wikipedia.org/wiki/public-interest-theory>

[7] Andrei Shleifer, ***'Understanding Regulation'***, European Financial Management, vol. 11, no. 4, 2005, 439-451.

[8] Ibid at n 4

[9] J.S Robert and F. Baylis, 'International Encyclopedia of Public Health, (1st ed.) 2008

form new combinations of heritable genetic material[10].

As the wordings imply, genetic engineering simply involves the process of modifying species DNA, in order create a recombinant breed of specie, informed by the hybridization or combination of the genetic or hereditary characteristics of the donor specie into the recipient specie. Genetic engineering also known as genetic modification or genetic manipulation, is the modification or manipulation of an organism's genes using technology. It is a set of technologies used to change the genetic makeup of cells, including the transfer of genes within and across species boundaries to produce improved or novel organisms. New DNA is obtained by either isolating and copying the genetic material of interest using recombinant DNA methods or by artificially synthesizing the DNA. A construct is usually created and used to insert this DNA into the host organism[11]. An organism that is generated through genetic engineering is considered to be genetically modifies (GM) and the resulting entity is a genetically modified organism (GMO). It is worth noting that genetic engineering has been applied in numerous fields, including research, medicine, industrial biotechnology and agriculture. In research, GMOs are used to study gene function and expression through loss of function, gain of function, tracking and expression experiments. By knocking our genes responsible for certain conditions it is possible to create animal model organisms of human disease, produce hormones, vaccines and other drugs. Genetic engineering also has the potential to cure genetic diseases through gene therapy.[12]

The advantages of genetic modified crops, inter-alia, are: pest resistance, herbicide tolerance (making weed control easier), it allows more affordable prices for fruits and vegetables, it increases staple crop production, enhances nutritional contents, enhance development of sustainable sources of energy and enable reduction in agriculture related pollution[13].

On the other hand, **PLANT VARIETIES** aptly represents a more precisely defined group of plants, selected from within a species, with a common set of characteristics and genetically modified to bring about different varieties. Both processes are may furnish very minimal distinction, it is worthy to note that:

a. While genetic engineering involves the mutation of the genes of a specie or the recombination of the gene of different species altogether plant breeding/variety is usually developed through traditional breeding techniques such as selection, hybridization and mutation breeding.
b. The process of genetic engineering can introduce new and desired traits from unrelated species, however, plant breeding rely on traits from within the same or closely related species. i.e. using iterative techniques to combine desirable traits from parent plants to create new varieties such as, parent plant selection, cross-pollination, selection and evaluation, stabilization etc.
c. Genetic engineering or GMO are subject to stricter regulations and involves more controlled and precise process, however, plant breeding are usually regulated through intellectual or industrial property rights and involves a more traditional and iterative process[14]
d. The process of "Genetic engineering" has been infused into a wide range of research studies cutting across various fields, plant variety/breeding is usually confined to ***"plants genera and species".*** Notwithstanding, the principles and techniques of breeding and variety development can as well apply to other organisms, areas or fields.

It is estimated that about 30% of people living in developing countries suffer from protein-energy malnutrition (PEM), a condition that imparts a heightened risk for diseases and causes slow or retarded development. PEM is caused by a deficiency of certain essential amino acids, the building blocks of proteins. Without these necessary components, the

[10] Eugene Rosenberg, 'Genetic Engineering', [21st April, 2017], available at https://foi.org/10.2016/b978-0-12-812502-1.00010-x> accessed on 11th September, 2024

[11] En.mikipedia.org , available at <https://en.m.wikipedia.org/wiki/Genetic_engineering> accessed on 16th October, 2024

[12] Ibid, n 8

[13] National Institute of Food and Agriculture, USDA, *'Plant Breeding'*, available at <https://www.nifa.usda.giv/topics/plant-breeding> accessed on 27th November, 2024.

[14] For example, GMOs are regulated by Government Agencies, such as USDA, EPA and FDA in the United States.

body is unable to manufacture the protein it needs, thus resulting in the aforementioned symptoms. However, plant breeders believe that having the requisite technology needed to mitigate the prevalence of this harmful condition would lead to promoting a balanced nutritional life. Instead of looking to doctors for the cure, plant breeders dug to the root of the problem and proposed a solution: ***Genetic Engineering***[15]. Aside this scientific process, plant breeding has been a conventional and even more contemporary way of creating nutritional sensitive varieties of plants. E.g. of such varieties are; hybridized corn, disease resistant wheat or high yielding soybean, etc.

CONCERNS ON PROTECTION OF PROPERTY RIGHTS ON GENETIC ENGINEERED PROCESSES/PLANT BREEDING

Amidst concerns surrounding the technology used in the genetic modification of species, of relevance to this research is issues arising from the ownership rights pertaining to the mutation of biological species to form a different breed. In other words, can there be an assigned industrial property right(s) arising from the modification or manipulation of an organism's genes to produce, improved or novel organisms?

According to Krupa Solanki and Dr. Tushar Chauhan,[16] Scientists research for years to develop new varieties which are economically important to us. Thus, it is very important to reserve their rights for using those transgenic plant species, especially for developing new Genetic Modified Organisms. IPR- Intellectual Property Rights for biotechnology or genetic engineering reserves these rights in forms of trademark, trade secret or patent. In addition to this, ideas, protocols, SOPs, software and other publications related to the product can also be considered in IPR documentations as well. This literally means that no one can use any form of one's idea or product arising from a genetic engineered process, either partially or fully without its original developer's permission.

Significantly, the right of producing, selling or importing inventions are commonly monopolized through patents. Once the period of patent expired, the product can be used in the form of ***"no profit share***" publicly. The trade secret is another form of IPR in which the product information, SOPs, protocol, business ideas and clientele remains protected.[17] Notwithstanding these measures, most laws regarding protection of a breeder's right of their genetically modified novel species are regulated by the domestic laws of various nations.

For example, in Nigeria, the Plant Variety Protection Act, 2021 is of absolute importance in filling the gap is Nigeria's Variety Protection Policy, breeder's registration, breeder's protection, variety propagation etc.

Similarly, In Africa, about 10 countries, including South Africa, Kenya, Morocco, Tanzania, Ghana etc., have their own versions of policies in place protecting plant breeders' innovations. This has elevated the introduction and disbursement of new varieties in those countries. South Africa, for instance, one of the leaders in the Africa's seed market, has had a Plant Breeder's Rights Law since, 1976, while Ghana recently, also passed its own Plant Variety Protection Act (Act 1050), passed in 2020. The moves by these nations has not only cemented the void in intellectual property right of plant breeder's in Africa but as well encourage breeders of plants who are, scientists, researchers or common farmers to be recognized, protected, paid for the work they do and also incentivize them to deliver quality seeds to boost ongoing agricultural initiatives[18].

REGULATORY FRAMEWORKS ON PLANT VARIETIES RIGHTS

- **Highlights of the International Convention for the Protection of New Varieties of Plants (ICPNVP), 1991**

The International Convention for the Protection of New Varieties of Plants (ICPNVP), 1991 is the more recent international framework for the protection and regulation of plant varieties amongst Members to the

[15] Gwinn Makayla, *'A Survey of Plant Breeding and Genetic Engineering',* the idea of an essay. Vol. 6, Article 15, available at <https://digitalcommons.cerdarville.edu/idea_of_an_essay/vol6/iss1/15> accessed on 20th November, 2024.

[16] In their article, "*Values of IPRS Intellectual Property Rights in Genetic Engineering"*, [2019], IJRAR, June 2019, Vol. 6, Issue 2

[17] Ibid at n 1

[18] Joseph Opoku Gakpo, "New Law Gives Ghana's Plant Researchers Incentive to Develop New Varieties" available at https://allianceforscienceorg/blog/2021/01/new-law-gives-ghanas-plant-researchers-incentive-to-develop-new-varieties/ accessed on 11th February, 2025.

Convention. The Convention was an amendment to the preceding convention of 1978.[19]The Convention sets the mark as a unifying framework for the recognition, protection, grant and enforcement of plant breeder's right, especially amongst members states who are part of the UPOV[20]. Although, it is to be earmarked that the Convention did not specifically capture any ***'industrial property title'*** to be approved for a developer or breeder of a novel plant variety, however, any such developer or breeder of a variety by way of application and passing of some criteria would be granted "***Breeder's Right***" against all others (unless as exempted) over the variety. However, the Convention allows reservations by State parties to the Convention to provide protection for such rights through the use of an industrial property title as far as varieties produced asexually are concerned[21]. The Convention also allows members of the **Union** right to conclude among themselves special agreements for the protection of varieties, in so far such agreements do not contravene the provisions of the Convention.[22]

The Convention, in its definition clause, emphasizes the meaning of concepts such as "**breeder, breeder's variety**", etc. The ***breeder*** is defined as:

a. A person who has selected, discovered or developed a variety
b. The person who employed or is the employer of the person mentioned above or who has commissioned the work, where the legislation of the relevant Contracting Party, so provides, or
c. The successor in title of the first or second person mentioned above, as the case may be[23]

On the other hand, "***breeder's right***" was described to mean, the right of the breeder as provided for in the Convention[24]. These can be said to mean privileges that are exclusively enjoyed by a plant breeder who has applied and have been granted such rights.

Consequently, "***variety"*** designates a grouping of plants within a single botanical taxon of the lowest known rank, which grouping, despite the fact that the conditions for granting the breeder's right are fully met, may be:

i. Determined by the expression of characters resulting from a given genotype or combination of genotypes,
ii. Is distinguished from any other group of plants by the expression of at least one of the mentioned characters and
iii. Is considered a unit in relation to its capacity to reproduce or propagate without being modified[25].

On the recognition and protection of a breeder's right by member's States, the ICPNVP 1991 imposes as a fundamental obligation on each contracting party to the Convention on the need to ensure the granting and protection of the right of the obligor or breeder[26]. In this sense, a contracting party is intended to be a State or an intergovernmental organization party to the Convention[27].

Article 3 of the Convention also requires State Parties which are already members of the Union for the Protection of New Varieties of Plants and new members of the Union on the date on which they become bound by the Convention; later on the expiry of a period of 5 years (for old members) and 10 years (for new members) from the date on which they become signatories to the agreement, to ensure the protection of all plant genera and species[28].

The Convention also provides for ***National Treatment*** by the Contracting Parties in respect of breeders' rights. The Convention grants nationals of a Contracting Party, as well as natural and legal persons having their regional headquarters in the territory of a Contracting Party (as far as the granting of breeders' rights is concerned), the right to enjoy in the territory of every Contracting Party to the Convention, the same treatment as that which is or may be granted by the legislation of another Contracting Party to its nationals, provided that the nationals, natural or legal persons comply with the conditions and formalities imposed on citizens of that other Contracting Party[29].

[19] See Art 1(iii) of the ICPNVP, 1991
[20] Union for the Protection of Varieties.
[21] Art 35(2), ICPNVP, 1991
[22] Art 32, ICPNVP, 1991
[23] Art 1 (iv) ICPNVP, 1991
[24] Art 1 (v) ICPNVP, 1991. These rights can be gleaned from Art 14 of the Convention.
[25] Art 1(5) ICPNVP, 1991
[26] Art 2, ICPNVP, 1991
[27] Art 1 (vi) ICPNVP, 1991
[28] Art 3, ICPNVP, 1991
[29] Art 4, ICPNVP, 1991

CONDITIONS FOR THE GRANT OF RIGHTS UNDER ICPNVP, 1991

The Convention specifically specifies 4 criteria which must be met for the grant of a breeder's right. The Convention provides that a breeder's right will be granted when the variety is:

1. New or novel
2. Distinctive
3. Uniform and
4. Stable

New or Novel

Novelty here, is synonymous to innovation and it means new or unpublished. A variety is considered new if, at the date of filing of the application for the breeder's right, the propagating or harvesting material of the variety has not been sold or otherwise transferred to third parties, by or with the consent of the breeder, for the purposes of exploiting the variety.

Consequently, in the territory of the Contracting Party in which the application is filed, the variety in question has not been propagated or harvested earlier than one year before the date and time of the filing of the application, and if it was in a territory other than that of the Contracting Party, four years before the date and time of the filing of the application, or in the case of trees or vines, six years before the said date[30].

In the case of recent creations, when a Contracting Party applies this Convention to a genus or species of plant to which it has not previously applied this Convention or a previous act, it may consider that a variety of the recent creation existed at the date of creation. This extension of protection shall satisfy the condition of novelty defined in paragraph (1) even if the sale or transfer to other persons described in this paragraph took place before the time defined in this paragraph[31].

Distinction:

A variety is considered distinct if it is clearly distinguishable from any other variety whose existence is well known at the time the application is filed. In particular, the filing of an application for the grant of a breeder's right or the registration of another variety in an official variety register, in any country, is considered to be recognition of the other variety at the date of the application, provided that the application leads to the grant of a breeder's right or the registration of the other variety in the official variety register, as the case may be[32].

Uniformity:

By convention, a variety is considered to be uniform or homogeneous if, in view of the variation that can be expected from the characteristics of its propagation, it is sufficient that same is uniform in its relevant characteristics[33].

Stability

The variety shall be deemed to be stable if its relevant characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle[34].

The above 4 (four) criteria reflects similar conditions in the domestic frameworks enacted by contracting parties to the Convention on conditions necessitating the granting breeders' right within their municipal States.

APPLICATION FOR THE GRANT OF THE BREEDER'S RIGHT.

The procedure for the grant of a breeder's right is enumerated in Article 10 of the Convention. The said provision, provides for the place of the first request. At this stage, the breeder can choose the authority of the Contracting Party to which he wants to submit the request for his right to be the first breeder of that variety[35].

In same vein, the Convention allows an Applicant (producer) to submit subsequent requests for the grant of the breeder's right. This can be done by applying to the authorities of other Contracting Parties for the grant of the breeder's right without waiting for the authority of the Contracting Party with which the first request for the grant of the breeder's right was made or first filed[36].

The Convention also provides for the **Independence of the protection of a breeder**. In that, no Contracting Party may refuse to grant a breeder's right or limit its duration on the grounds that protection of the same variety has not been requested,

[30] Art 6(1), ICPNVP, 1991
[31] Art 6(2) ICPNVP, 1991
[32] Art 7, ICPNVP, 1991
[33] Art 8, ICPNVP, 1991.
[34] Art 9 of the ICPNVP, 1991
[35] Art 10 (1) ICPNVP, 1991
[36] Art 10(2) ICPNVP, 1991

refused or expired in another country or intergovernmental organization[37].

The Convention further made provision with respect to **Right of Priority** on plant breeding. It allows any breeder who has duly filed an application for the protection of a variety in one of the Contracting Parties (the "first application"), for the purpose of filing an application for the grant of a breeder's right for the same variety with the authority of any other Contracting Party (the "subsequent application"), to enjoy a right of priority for a period of 12 months. This period is calculated from the date of presentation of the first application. The day of filing is not included in the subsequent period[38].

The Convention also requires Contracting Parties to examine/consider the application for the grant of a breeder's right. In this regard, any decision to grant a breeder's right requires an examination of compliance with the conditions laid down in Articles 5 to 9 of the Convention[39]. During the examination, the authority may grow the variety or carry out other necessary tests, have the variety grown or carried out other necessary tests, or take into account the results of growing tests or other tests already carried out[40]. For the purposes of the examination, the authority may request the breeder to provide all necessary information, documents or materials to enable them adequately examine the variety. The competent authority in question, is the municipal parastatal organization of the country of the contracting party, responsible for the implementation of the convention with regard to the granting of breeders' rights[41].

Within the designated procedures for applying for the granting of breeders' rights, the Convention as well provided for ***temporary protection***, this implies recognizing the intellectual property right of a prospecting breeder. Here, the Convention categorically emphasized that each Contracting Party must take measures to protect the interests of the breeder during the period between the submission or publication of the application for the granting of the breeders' right and the actual granting of that right. It is noteworthy to state that the provisional protective measures shall have the effect that the holder of the breeders' right is entitled to at least fair remuneration from any person who, during the period in question, has carried out acts which, after the granting of the right, require the authorization of the breeder. A Contracting Party may provide that the said measures shall only take effect in relation to persons whom the breeder has notified of the filing of the application[42].

RIGHTS AND LIMITATIONS OF THE BREEDER

Article 14 of the Convention lists the scope of the breeder's right. Subject to Articles 15 and 16, the following acts concerning "**propagating material of the protected variety**" shall require the breeder's authorization:

(i) production or reproduction (multiplication),
(ii) the condition for multiplication,
(iii) offering for sale,
(iv) sale or any other form of marketing,
(v) export,
(vi) import, storage for any of the purposes mentioned in points (i) to (vi) above[43].

The above-mentioned privileges or rights belonging to a breeder under Article 14 of the Convention can only be availed a third party, only, subject to certain limitations, with the authorization of the breeder. However, it is not mentioned in the Convention the modus operandi in which such authorization can be applied and granted.

Consequently, the Convention provides for the following exceptions to the rights of the breeder. They are:

Acts taken privately and for non-commercial purposes, acts taken for experimental purposes and action taken with the aim of creating other varieties (except where such other varieties are essentially derived varieties)[44] are compulsory exemptions to the rights of a breeder. In other words, any actions carried out for the foregoing purposes are exempted from and do not extend to those rights enjoyed by a breeder.

[37] Art 10(3) ICPNVP, 1991
[38] Art 11, ICPNVP, 1991
[39] These are the 4 criteria to be satisfied for the grant of the breeder's right.
[40] Art 12, ICPNVP, 1991
[41] Art 13(1)(ii) ICPNVP, 1991.
[42] Art 13 and 14, ICPNVP, 1991.
[43] Art 14, ICPNVP, 1991.
[44] Art 15(1); 14 (5) ICPNVP, 1991.

There is another category of optional exceptions. Here, each Contracting Party may, within reasonable limits and subject to the protection of the legitimate interests of the breeder, restrict the breeder's right for any variety, in order to allow farmers to use it for propagating purposes, in their own farm, the product of the harvest which they have obtained by planting in such farm or the said protected variety or a variety that is deemed essentially derived[45].

A variety is deemed essentially derived from another variety (known as the initial variety) where;

> it is predominantly derived from the initial variety, or from a variety that is itself predominantly derived from the initial variety, while retaining the expression of the essential characteristics that result from the genotype or combination of the genotypes of the initial variety or it is clearly distinguishable from the initial variety.[46]

THE NIGERIAN PLANT VARIETY PROTECTION ACT 2021

The concept of creating new plant varieties through the process of plant breeding is not entirely new to Nigeria, as there have been some amateurish practices by farmers in this field before the intervention of any regulatory framework. Prior to 2021, there was no framework for the protection, regulation and enforcement of plant breeder's rights; more so, Nigeria was not a signatory to the International Union for the Protection of New Varieties of Plants (UPOV) Convention. The previous position to a large extent, impeded the exploitation of such rights; it even deprived plant breeders in Nigeria access to high-quality new varieties from foreign countries, as such relations may be discouraging to foreign plant breeders where the new variety cannot be protected.

Consequently, in May 2021, President Muhammadu Buhari signed into law the Plant Variety Protection Act 2021 to establish a functioning regime protecting plant varieties in Nigeria. Consequent to the promulgation of the Act, Nigeria became signatory to the International Convention for the Protection of New Varieties of Plants, 1999 and the Union for the Protection of Varieties of Plants (UPOV) reaffirmed Nigeria's conformity with the ICPNVP, 1991, allowing Nigeria to become a UPOV member[47]. The PVP Act demonstrates Nigeria's commitment in transforming agricultural production while encouraging global companies to invest in local seed business activities in Nigeria[48].

MAJOR ELEMENTS OF THE ACT

The Plant Variety Protection Act, 2021 protect plant varieties, encourages investment in plant breeding and crop variety development and establishes a Plant Variety Protection Office for the promotion of increased staple crop productivity for smallholder farmers in Nigeria. The Act makes provision for a Plant Variety Protection Office, known as **'the office',** which is domiciled in the National Agricultural Seeds Council (NASC) and same is administered by Registrar[49] who is appointed by the Board of the NASC on the recommendation of the Director General.

The Office as maintained by the Registrar is responsible for the Granting of breeder's right, maintaining a register and providing information on plant breeder's rights that are issued in Nigeria by the Plant Variety Protection Office. The Registrar further has a duty to facilitate the transfer and licensing of plant breeder's rights, ensure networking and collaboration with local and international bodies whose functions relate to issues surrounding a breeders' rights and as well perform other functions as are necessary for the facilitation of the Nigerian Plant Variety Protection Act, 2021[50].

Significantly, the Plant Variety Protection Act, 2021 was promulgated majorly to enhance the following Objectives:

[45] Art 15(2) ICPNVP, 1991.
[46] Art 14(5)(b)(i)-(iii).

[47] Managing IP, *'Nigeria's Plant Variety Protection: in line with international IP Norms'* <https://www.managingip.com/article/2a5d034hr8td8p0rej669/nigerias-plant-variety-protection-in-linw-with-international-ip-norms> accessed on 27th November, 2024.
[48] Ifeanyi E., Blessing Udo & Kayode Ikumelo, "*Overview of the Nigeria's Plant Variety Protection Act, 2021 and its Impact of Section 43(2) on Plant Breeders*", available at <https://sssrn.com/abstract=3928965> accessed 11th September, 2024.
[49] The Registrar referred to in the act is the Registrar of Plant Breeders Rights
[50] S. 5 of the Plant Variety Protection Act, 2021

i. Promote increased staple crops productivity for smallholder farmers in Nigeria and encourage investment in plant breeding and crop variety development.
ii. Promote increased mutual accountability in the seed sector
iii. Protect new varieties of plants.
iv. Promote food Security and Livelihood in Nigeria as well as enhance Nigeria's agricultural landscape in line with best global practices.
v. Bridge the gap in agricultural financing initiatives in Africa.

To bolster the objective of the Act, a Breeder's right development fund was established[51]. The fund is applied towards the development and promotion of the rights of plant breeders. The fund is also applied for the training of plant breeders and establishment and maintenance of plant variety collection and data base. The funds can as well be used for any other activity relating to the administration of the Act. The establishment of the fund is a collaborative effort between the Ministry of Agriculture and Ministry of Finance and it presents an attempt towards maintaining viable development in Nigeria's agriculture landscape, especially towards breeder's intellectual property rights.

The Plant Variety Protection Advisory Committee

The Act makes provision for the establishment of the Plant Variety Protection Advisory Committee. This is an ad-hoc committee, comprising relevant key stakeholders in the seed value chain sector. These stakeholders is appointed by Director General of the National Agricultural Seeds Council (NASC)[52].

The Advisory Committee in accordance with the Act, is mandated to take on the following roles:

i. Advising the Minister of Agriculture on the enforcement of the provision of the Plant Variety Protection Act, 2021.
ii. Receive reports of plant breeders' rights applications from the Registrar
iii. Receive information on the plant breeders' right reports and as well get information of the registrar's test results.
iv. Manage the operations of the Plant Breeder's Rights Development Fund.[53]

Protected Varieties and Conditions for grant of a breeder's right

The Act makes provision for the protection of varieties. This protection applies to all plant genera and species. Furthermore, the Act stipulates conditions necessitating the protection of a breeder's rights. To this end, the right of a plant breeder can only be granted with respect to a variety which is **New, Distinct, Uniform** and **Stable**[54]. This is akin to conditions for protection as stipulated under the International Convention for the Protection of New Varieties of Plants.

Application for Breeder's right

According to the Act, the breeder of a new plant variety is enjoined to apply for the grant of a 'breeder's right' for that variety. Such application should specify the following[55]:

a. The name and address of the applicant.
b. Where the Applicant is the successor-in-title of the person who bred or discovered and developed the variety:
    - Proof of title or authority in the form and content satisfactory to the registrar or may be specified by regulations establishing the existence and validity of assignment or succession, and
    - The name and address of the person who bred or discovered and developed the variety.
c. The proposed denomination and description of the characteristics of the variety as the Registrar may require.
d. Samples of the propagating material in quantities as the registrar may require, and
e. Any additional information, documents and material that may be required in connection with the application as may be prescribed in the Act.

Nullity, Cancellation and Surrender of the breeder's right

The rights of a breeder are not absolute and can be neutralized, based on stipulated infraction. The

[51] S. 44 of the PVP Act, 2021
[52] S. 9 of the PVP Act, 2021
[53] S. 10 and 11 of the PVP Act 2021
[54] Section 13 PVP, 2021
[55] Pt IV of the Plant Variety Protection Act, 2021

Registrar of NASC has power to declare a breeder's right granted by him null, where it is proven that:

1. The variety did not comply with the conditions specified in sections 14 and 15 of the Act at the time the breeder's right was granted.[56]
2. Where the grant of the breeder's right has been essentially based upon information and documents furnished by the applicant, the conditions laid down in section 16 of the Act were not complied with at the time of granting the breeder's right; or
3. The breeder's right has been granted to the person who is not entitled to it, unless it is transferred to the person who is so entitled[57].

Similarly, the Registrar can cancel a breeder's right, where it is established that the conditions as specified in Section 16 of the Act are no longer fulfilled[58]. Again, the Registrar may as well cancel a breeder's right where the holder of the breeder's right does not provide the information, documents or materials deemed necessary for verifying the maintenance of the variety within the period as provided in the regulation made under the Act[59]. In same vein, Where the holder of the breeder's right fails to pay the fees which may be payable to keep his right in force or does not propose another suitable denomination where the denomination of the variety is cancelled after the grant of the right, the registrar would cancel any such breeder's right[60].

Furthermore, the Act allows the holder of a breeder's right by a written notice to the Registrar make a surrender of any right previously granted to them. Where this is the case, the Registrar shall within one month from the date of receiving the notice of surrender, terminate the breeder's right and publish a notice in the Federal Government Gazette or two national daily newspapers effecting such termination[61].

CHALLENGES ARISING FROM THE ENFORCEMENT OF A BREEDER'S RIGHT UNDER THE PLANT VARIETY PROTECTION ACT, 2021

One of the notable shortcomings in the Act is the provisions of section 42 and 43 of the Nigeria Plant Variety Protection Act, 2021. Here the Act makes the decision of the Minister of Agriculture, sitting as an appellate body, final, with respect to any issue arising from the grant of a breeder's right.

Section 42 of the Act is hereby reproduced;

"42(1) an appeal from the decisions of the registrar made under this act shall lie to the minister (of agriculture)

(2) A person who is aggrieved by any of the decisions of the registrar may appeal to the minister by submitting a notice of the appeal within 60 days following the publication, or of the receipt, of the individual notice of such decision by the person whose interest is the source or subject of the appeal.

43(1) the minister;

- ***(a) May conduct an investigation, if he deems necessary to do so, and may hold a hearing of the appeal or make a decision based on a written submission.***
- ***(b) May confirm, set aside, or vary any decision or action of the registrar and may order the registrar to carry out his decision; and***
- ***(c) Shall give the reasons for his decision in writing, and copies of the decision shall be given to the appellant, the registrar, and any other interested party.***

(2) Subject to the provision of this section, a decision of the Minister (of agriculture) shall be final".

It has been argued that aforesaid provision of the PVP Act is unconstitutional and inconsistent with the provision of the Nigerian Constitution by allowing the decision of the Minister (of Agriculture) sitting on appeal, to be final in respect of matters arising from the Act. This is more so as it implies ousting jurisdiction of the court of law in sitting over disputes arising from a breeder's right. Section 4(8) of the 1999 Constitution provides:

> ***"save as otherwise provided by this Constitution, the exercise of legislative powers by the National Assembly or by a House of Assembly shall be subject to the jurisdiction of a court of law and of judicial tribunals established by law, and accordingly, the National Assembly or***

[56] Section 14 and 15 of the Act has to do with the conditions for the grant of a breeder's right
[57] S. 35(a)(b) and (c) of the PVPA, 2021
[58] S. 36(1) of the PVPA, 2021
[59] S. 36(2)(a) of the PVPA, 2021
[60] S. 36(2)(b)(C) of the PVPA, 2021
[61] S. 38 of the PVPA, 2021.

> ***House of Assembly shall not enact any law, that ousts or purports to oust the jurisdiction of a court of law or of a judicial tribunal established by law".***

From the clear wording of the above provision, the supremacy of the Constitution was affirmed as against statutory provisions, especially those provision providing ouster clauses, since the Constitution expressly prohibit the legislature from enacting any law which ousts or purports to ousts the jurisdiction of a court of law, except as permitted by the Constitution.

Consequently, in Inakoju v. Adeleke[62] the Court held that:

> ***"Ouster clauses are generally regarded as antithesis to democracy as the judicial system regards them as unusual and unfriendly. When ouster clauses are provided in statutes, the courts invoke section 6 as barometer to police their constitutionality or constitutionalism" (@ pp. 597, paras E-H)***

Therefore, since the legitimacy of section 43(2) of the PVP Act is tethered to the constituency of the Constitution, it is safe to say that in specific situations, the operation of the appeal procedure provided under both sections may fall short of this salient requirement for validity and will therefore be void to the extent of its inconsistency. In any case, where section 43(2) of the PVP Act becomes *sub-judice*, the court will not strip itself of jurisdiction as it will find the same provision to be unconstitutional and *Ultra Vires* the power of the legislature[63].

The point has been made that section 43(2) may present a business-friendly atmosphere through which parties may expediently resolve their disputes by the Minister in its appellate capacity from the decision brought before it from the Registrar by foreclosing the cumbersome and lengthy litigation proceedings. However, the point still remains that the procedure is unconstitutional and it cannot effectively stop parties from exploring appeals to the court of law in necessary instances. The point should be made clear that, in any case, the office of the Minister is not the suitable channel in resolving disputes in the finality between parties as to the adjudication of their rights and duties, notwithstanding the hitches fraught with litigation[64].

Ifeanyi E. Okonkwo, etal, further recommended in their work that, to prevent this challenge, section 43(2) of the PVP Act has to be amended to expressly include appeals to the court from the decision of the registrar in lieu of appeals to the Minister. This ensures that such disputes are brought to the right forum which could then boost stakeholder's confidence in the dispute resolution mechanisms established by the Act. As an alternative, the act could be amended to create an Arbitration Tribunal to which appeals from the decision of the registrar would lie. Similarly, further appeals from the decision of the tribunal would lie to the court in accordance with the provisions of this Constitution[65].

Impact of the Nigerian Plant Variety Protection Act 2021

In alignment with the public interest theory, the PVP Act as one of its take-away, will provide legal intellectual property rights to plant breeders who developed new and improved seeds for increased crop production. The PVP Act is calculated to help the country move from generation $0 from seed export to generating well over $2.0 billion USD from seeds export within the first by years of the operationalization of the law. With Nigeria's growing population, set to double about 400 million by the year 2050, there is the urgency in putting together steps to enhance strategic investment in the agricultural sector, especially by providing high quality seeds to farmers to boost food production and strengthen national food security and livelihoods[66]. The PVP Act would give breeders and investors in the seed sector the assurance and confidence to invest in Nigeria while addressing the current issue of unacceptably low yield per hectare produced by farmer. Increase in investment in the seed sector arising from the operationalization of the Act would no doubt create well-meaning jobs, especially in rural areas and further result in massive contribution to Nigeria's GDP.

The Act also creates a structure for protecting plant varieties in Nigeria and while providing recognition and proper remuneration for the breeders who

[62] (2007) 4 NWLR (Pt. 128) 500
[63] Ibid, n 40, p. 11
[64] Ibid, n 40 p. 12
[65] Ibis, n 40 p. 12
[66] USDA Report, Government of Nigeria signed Plant Variety Protection Bill, by Ebenezer Boluwade, June 23rd, 2021, Report No. N12021-0005

developed these varieties. Further, the Act enhances collaborations amongst relevant stakeholders in the agricultural sector to providing value to the industry as well as creates an enabling environment for agricultural research. These initiatives would no doubt lead to a vibrant and competitive agricultural landscape.

CONCLUSION AND RECOMMENDATIONS

The quest to cover the gaps in the agricultural industry in Nigeria informed the enactment of the Plant Variety Protection Act, 2021. The Act undoubtedly sets to be a game changer as the country envisions economic growth through agricultural value chains for the improvement of her food security. It is said that the existence of a legal framework and administrative structure as enshrined in the Act will spur private sector investment in developing new and novel varieties.

Amidst the promising impacts of the Act, it is recommended that all hands be on deck to ensuring the provisions of the Act is duly implemented. It is further recommended that collaborations both at the local, regional and international level be effected to actualize the objectives of the Act. There should be provisions for agricultural sensitive interventions, which cuts across key sectors, such as, finance, technology, policy advocacy, inclusivity, labour etc., to enable maximization and effectiveness of the provisions of the Act in the relevant industry.

Finally, awareness creation and information dissemination on plant breeding should be disseminated across stakeholders in relevant sectors to accentuate the actualization of the intendment in the Act.

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