



DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

PLANT BREEDERS' RIGHTS POLICY

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1. Introduction

Since the beginning of civilization, humans have endeavored to alter the genetic structure of plants. They have strived for higher yields, improved nutritional content, stronger fibers, greater pest resistance, immunity to disease, and drought tolerance. Over the millennia, plant breeders have crossed landraces and introduced foreign varieties or wild varieties into local plant populations hoping a set of desired characteristics would prevail. Through both conventional breeding and biotechnology, agriculture has been endowed with a rich stock of plant genetic resources.

Plant breeders' rights (PBR) evolved since the nineteen thirties when crop improvement became an applied form of genetics practiced by specialized institutions and more frequently commercial seed companies. The development of biotechnology and its subsequent application in agriculture through genetic engineering, led to the demand for intellectual property right (IPR) protection of such products and processes. These developments have had far reaching implications; leading to a shift of variety development from farmers to the private sector. This has provoked serious tensions around food securities and biodiversity management. Some of the concerns include: that the PBR regimes encourages greater centralization of research, rather than research tailored to respond to local environmental and socio-economic conditions, contribute towards further privatisation of the genetic material needed for research in the hands of a small number of multinational corporations, and the decline of public sector research. Despite these concerns, many countries, including South Africa, are under pressure to fulfill its obligations of adopting an effective plant variety protection system while still addressing national imperatives.

It has however been shown that the absence of an effective system for the protection of plant varieties is likely to deter foreign breeders from introducing their varieties in a particular country. This potential impact is especially relevant for developing countries with smaller domestic breeding sectors. Introduction of foreign varieties adds to the choice that farmers have to select

the best variety for their conditions and thus supports agricultural development and food security policies.

South Africa's plant variety protection system is aligned to the 1978 Convention of the International Union for the Protection of New Varieties of Plants (UPOV). UPOV aims to provide a *sui generis* form of intellectual property protection system specifically designed to reflect the particularities of breeding, cultivation and use of new varieties of plants which has seen considerable expansion in recent years. To be eligible for protection, plant varieties, must be novel, distinct, stable and uniform.

Other international instruments relating to intellectual property rights on genetic resources include: the Agreement on Trade Related aspects of Intellectual Property Rights (TRIPs), the Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Many of these instruments are negotiated in parallel, posing a serious challenge for many developing countries to engage such discussions in a coherent manner.

There has been considerable debate about the different legal instruments available for plant variety protection. Many argue that these are designed to accommodate capital-intensive, large-scale commercial agricultural systems that prevail in developed countries. It is further argued that it does not take into account the interest and contributions of traditional farmers to the development of plant varieties and that it will diminish the availability of genetic resources for further breeding and ultimately genetic erosion.

UPOV recently conducted a study on the impact of the introduction of a plant variety protection systems in selected UPOV member states namely Argentina, China, Kenya, Poland and the Republic of Korea. After the introduction of a plant variety protection system, the following were observed in the respective countries:

- an overall increase in the numbers of varieties being developed

- such protected varieties displayed increased performance
- more foreign varieties were introduced (i.e. application by foreign plant breeders)

2. Definitions

Breeder: refers to any of the following:

- (a) the person who bred, or discovered and developed, the variety;
- (b) the employer of the person referred to in paragraph (a), if that person is an employee whose duties are such that the variety was bred, or discovered and developed, in the performance of such duties; or
- (c) the successor in title of the person referred to in paragraph (a) or the employer referred to in paragraph (b)

Compulsory license: A license to exploit a patented invention or plant breeder's right granted by the state upon request to a third party for instance to remedy an abuse of rights by the patentee.

Discover and develop: discovery of a plant in the wild together with its use in selective propagation to develop a new variety.

Examination (Substantive Examination): A full examination of the patent application, undertaken by a patent examiner, to determine whether the application complies with all the legal requirements for patentability set out in the legislation. The examination takes into account any documents and/or evidence found during the search.

Farmers' Rights: Rights arising from the past, present and future contributions of farmers in conserving, improving, and making available

genetic resources, particularly those in the centres of origin/ diversity.
(According to FAO Resolution 5/89)

Farmers' varieties: product of breeding or selection carried out by farmers.

Indigenous knowledge (IK): IK manifests itself in areas ranging from cultural and religious ceremonies to agricultural practices and health interventions and is usually used synonymously with traditional and local knowledge.

Landrace: A crop cultivar or animal breed indigenous to the Republic of South Africa that evolved with and has been improved by traditional agriculturalists, but has not been influenced by modern breeding practices.

Patent: An exclusive right awarded to an inventor to prevent others from making, selling, distributing, importing or using their invention, without license or authorisation, for a fixed period of time. In return, society requires that the patentee disclose the invention in the public.

Plant Breeders' Rights (PBRs): Rights granted to breeders of new, distinct, uniform and stable plant varieties. They normally offer protection for at least twenty years. Most countries have exemptions for farmers to save and replant seeds on their holdings, and for further research and breeding.

Registration: A formal procedure for obtaining an IP right typically requiring an application and examination of that application.

Sui Generis: Latin expression meaning "of its own kind". A *sui generis* system of protection for example for traditional knowledge would be a system of protection separate from the existing IP system.

The Act: Plant Breeders' Rights Act, 1976 (Act No. 15 of 1976) including the regulations.

Acronyms & Abbreviations

- CIOPORA:** International community of breeders of asexually reproduced ornamental and fruit varieties.
- CBD:** Convention on Biological Diversity
- DUS:** Distinctness, Uniformity, Stability
- DAFF:** Department of Agriculture, Forestry and Fisheries
- IKS:** Indigenous Knowledge Systems
- IPR:** Intellectual Property Right
- ITPGRFA:** International Treaty for Plant Genetic Resources for Food and Agriculture
- PBR:** Plant Breeders' Rights
- PGRFA:** Plant genetic resources for food and agriculture
- TRIPS:** Trade-Related Aspects of Intellectual Property Rights
- UPOV:** International Union for the Protection of New varieties of Plants
- WTO:** World Trade Organisation

3. Problem Statement

The Plant Breeders' Rights Act, 1976 was revised in 1996 without a holistic policy to support legislation and regulations and to serve as a guideline document for the implementation of activities and services aimed at improving the administration and management of the Plant Breeders' Rights Act in South Africa. The problems associated with Plant Breeders' Rights can be summarised as follows:

3.1 Farmers' Rights

Farmers' Rights consist of the customary rights that farmers have had as stewards of agro-biodiversity since the dawn of agriculture to save, grow, share, develop and maintain plant varieties; their legitimate right to be rewarded and supported for their contribution to the global pool of genetic resources as well as to the development of commercial varieties of plants; and their rights to participate in decision making on issues that may affect these rights.

The ITPGRFA confirms the important role of farmers in conserving; improving and making available the genetic resources used in modern breeding and establishes the concept of farmers' rights. The Treaty recognizes that the realization of Farmers' Rights rests with national governments and should include:

- the protection of traditional knowledge relevant to plant genetic resources for food and agriculture (PGRFA)
- the right to equitably participate in sharing benefits arising from the utilization of PGRFA
- the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of PGRFA.

A plant breeder's right gives the right holder a limited exclusive right to the variety. Traditional farmer practices such as exchange and saving protected varieties for re-sowing may constitute infringement of that right. The Plant

Breeder's Rights Act, 1976 (Act No. 15 of 1976) allows farmers to use (re-sow) protected material on his or her own holding. The expression of farmer's rights in this context is referred to as farmer's privilege. As a result of a lack of a clear definition of the "farmer" concerned, the scale of production and the scope of plant varieties, the farmer privilege has been abused in many instances to the extent that investment in breeding of certain crops has seen a significant decrease.

The utilization of PGRFA (which includes farmer varieties) is important in the development of new plant varieties. Currently, neither the PBR Act nor the UPOV Convention offers protection for these varieties due to their lower level of distinctness, uniformity and stability. It is therefore not possible to use these systems as benefit-sharing mechanisms in recognition of farmer's contributions as stewards of agrobiodiversity.

Traditional knowledge (TK) (associated with PGRFA) is usually shared and even the holders of such knowledge do not have the right to commercialise it for personal gain. Such knowledge is often utilised in the development of new varieties for which PBR is claimed, without due acknowledgement of the contributions of the involved communities. One of the problems confronting TK holders is the commercial exploitation of their knowledge by others, which raises questions of legal protection of TK against misuse, the role of prior informed consent, and the need for equitable benefit-sharing.

3.2 Intellectual Property and Sustainable Use of Biodiversity

The CBD aims to encourage the conservation of biological diversity, as well as their sustainable use and the sharing of benefits arising out of their use.

Given the incentives for plant breeders to invest in research and breeding technologies related to new plant varieties, it might be thought that plant variety protection would contribute positively to plant genetic diversity over time. On the contrary, plant genetic diversity is eroded rather than enhanced by the granting of plant breeders' rights. It is posited that a strengthening of IPRs result in a loss of *in situ* agricultural biodiversity. This follows from the

hypothesis that a strengthening of IPRs will further encourage private breeding efforts. Increasingly farmers rely on commercial plant breeders for seeds and other propagating material at the expense of traditional farmer varieties, which are more often better suited for local conditions. Farmers will increasingly have as their only option commercial seed that is genetically similar and there will be fewer genetically-diverse varieties bred in the public sphere because of the development cost related to IPRs.

The threat is that the traditional varieties might disappear if not properly collected and maintained and made available for breeding. The traditional varieties also have difficulty in competing with the new higher yielding, disease resistant varieties on the market. As a result of the requirement for genetic homogeneity, such protected plant material, may be less adaptable to local conditions than the traditional farmer varieties.

3.3 Exploitation and Biopiracy of Indigenous Resources

Access to existing plant germplasm is an important consideration for breeding, research and development. Such access can be obtained via *in situ* and *ex situ* collections of seeds and plant propagating material. In many countries, including South Africa, access to genetic resources is regulated by national laws, which are consistent with the CBD. Where access is granted, agreed benefit-sharing mechanisms also become relevant. This requires a declaration that the genetic material has been lawfully acquired or proof that prior informed consent concerning the access of the genetic material has been obtained. There are many examples where plant genetic resources with potential useful characteristics were accessed without prior informed consent and without agreed benefit-sharing mechanisms in place. It is therefore important to ensure that mechanisms are in place to prevent illegal bioprospecting, trace the use of material accessed and negotiate access and benefit-sharing agreements. The UPOV Convention however, requires that the breeder's right should not be subject to any further or different conditions than the ones required to obtain protection. UPOV considers that since the legislation on access to genetic material and legislation dealing with the grant of plant breeders' rights pursue different objectives, it is appropriate to include

them in different legislation, although such legislation should be mutually supportive.

A key aspect of the CBD is that it recognises the sovereign rights of states over their biodiversity and knowledge, and thus gives the state rights to regulate access, and this in turn enables the state to enforce its rights on arrangements for sharing of benefits. Under the UPOV Convention, there is no provision for holder of a plant breeder's right on claims involving biological resources or related knowledge to share benefits with the state or communities in countries of origin.

3.4 Skewed ownership and research activities

In South Africa, 60% of plant breeders' rights holders are foreigners that are largely based in Europe and North America; this asymmetry is not unique to South Africa as a developing country. The large percentage of foreign applications may indicate the limited scope of domestic breeding activities.

A sizable share of the protected varieties is ornamentals which might indicate a slowdown in investment in agricultural research and development, especially the research targeted to orphan food crops.

3.5 Lack of a formal advisory body to support the Regulatory Officers

There are continuous developments in matters relating to Plant Breeders' Rights such as new breeding techniques, research developments in plant systematics, amendments in related legislations, International Treaties, etc.

The Registrar and support personnel do not have expertise in all the areas affecting the administration of the Act and may from time to time need advice from various experts.

3.6 Lack of awareness about the Plant Breeders' Right Act

It would seem that not all sectors of the community are aware of the Plant Breeders' Rights Act. This might lead to:

- innocent infringements of plant breeders' rights for certain varieties,
- developers of new varieties not protecting their intellectual property, or
- farmers being unaware of new varieties with improved performance characteristics.

3.7 Enforcement of Plant Breeders' Rights

Breeders' rights may be infringed through:

- (i) unauthorised production and sale of the protected variety under its real name.
- (ii) unauthorised production and sale of the protected variety under a different name.
- (iii) unauthorised export to territories where there is no protection for the species in question.
- (iv) production outside the protected area and unauthorised import into the protected territory.
- (v) the use of farm-saved seed without paying the fees due to the breeder.

It is legitimate to think that the low fines currently prescribed are not dissuasive, but on the contrary, could encourage counterfeiters to include any possible fines as part of their illegal activity. Furthermore, holders of plant breeders' rights may expect the Registrar to investigate alleged infringement offences on their behalf.

3.8 Exclusive rights

The holder of a plant breeder's right holder have the authority to exclude all third parties from engaging in, activities that the right covers (such as propagating, reproduction, export, import or selling the protected variety) during the period of sole right to allow the holders to obtain a return on their investment. This exclusionary right may however have the effect of preventing the free exchange of knowledge, of products of the knowledge and their use or production.

The system of exclusive rights is at odds with traditional social and economic system in which local communities make use of, and develop and nurture, biodiversity. For example, seeds and knowledge on crop varieties are usually freely exchanged within the community.

3.9 Limited number of protected genera and species

Currently, South Africa extends protection to a limited number of genera and species declared by the Minister in terms of the Plant Breeders' Rights Act, 1976 (Act No. 15 of 1976). South Africa is entitled to issue an instrument of accession in accordance to Article 34(2) of the 1991 Act of the UPOV Convention. UPOV 1991 Convention requires that each Contracting Party bound by the UPOV 1991 Act extends protection to all plant genera and species. CIOPORA submits that the lack of an obligation to protect all plant species under the 1978 Convention does not conform to the obligations imposed under article 27.3B of the TRIPS Agreement.

3.10 Kinds of plants regulated by other legislations

Increasingly applications to have kinds of plants regulated by other legislation to be declared of in terms of the Plant Breeders' Rights Act, 1976 (Act No. 15 of 1976) are received. Some of these plants may be considered injurious to the society and the environment, e.g. narcotic plants and alien invasives.

Also, requests are sometimes received from persons who want to apply for a plant breeder's right for plants discovered in the wild in South Africa or other country. The breeder's right can only be granted to kinds of plants which have been 'discovered and developed' to produce new varieties which are distinct, uniform and stable.

The Plant Breeders' Rights system administrative procedures are currently not in harmony with the requirements of other pieces of legislation, e.g. the National Environmental Management: Biodiversity **Act**, 2004 (**Act** No 10 of 2004) and the Conservation of Agricultural Resources **Act (CARA)**, 1983 (**Act** No 43 of 1983)

3.11 Submission of documents

The filing date of an application for a Plant Breeder's Right is of importance as it impacts on novelty requirement and priority claims. Currently, only original signed documents are accepted for filing a Plant Breeder's. Rights application. This would mean these documents are often posted to the office of the Registrar and due to delays, by the time they reach this office the novelty period has expired and such applications may no longer be accepted.

In the light of developments in electronic media.

In the light of developments in electronic media, other options such as electronic submissions of applications need to be explored.

3.12 Applications for Genetically Modified (GM) plant varieties

Applications for protection in terms of the Plant Breeders' Rights Act may be received for varieties containing events that have not been yet released or approved in South Africa in terms of the GMO Act, 1997 (Act No. 15 of 1997).

Processes to align the testing of varieties in terms of these two Acts need to be investigated.

3.13 Submission and acceptance of variety denominations

The purpose of the variety denomination is to identify that variety in a uniform and unique way worldwide. It is important that the variety can be identified at an early stage. It is required that a breeder designates a denomination in respect of the variety he or she is applying for.

Increasingly breeders do not designate variety denominations upon application but instead provide breeder's references which are subsequently published as variety denominations. Upon granting of a plant breeder's right, breeders then apply for a change of the breeder's reference supplied to a suitable variety denomination. This practice presents challenges in administration and is not in line with international practices. It is envisaged that in future alteration of denominations be only allowed before a plant breeder's right is granted.

3.14 Submission of plant material for evaluation

Applicants have to supply plant material of the candidate varieties for DUS evaluations within 12 months from the lodging of the application failing which he/she will apply for extension for a specified period setting out reasons for the granting of extension. It is however not stipulated how many times such extension can be granted.

In most instances the plant material has to be imported and as such applicants cannot always supply the requested material within the prescribed period due to problems associated with phytosanitary requirements, deaths in quarantine, appropriate rootstocks not available, etc. This result in plant material provided up to 15 years after the initial filing date.

3.15 Technical requirements for granting plant variety protection

a) Human Resource Capacity

DUS testing requires detailed observations of characteristics where experts need to make a distinction between crop variation caused by genotypic differences and crop variation caused by environmental factors. Limited

numbers of trained staff and high mobility in the national public service is currently a major impediment for the current regulatory system.

b) Genetically Modified (GM) varieties

The technical requirements for granting plant variety protection for a variety that has been genetically modified is a concern as many of the genetically modified varieties do not present a different phenotype than its conventional counterpart. In most cases differences between the new GM plant variety and other conventional or GM varieties can only be detected through molecular testing.

3.16 Maintenance of plant material after expiry of the plant breeder's right

The holder of a plant breeder's rights is required to maintain the reproductive material 'during the currency of the right'. It is not clear what happens to the said material after the period of the right has expired. This poses a problem as some holders, particularly for fruit crops, would want to destroy the material after the right has terminated.

To test distinctness of the candidate variety, it should be compared to other varieties of the same kind of plant of which their existence on that date is a matter of common knowledge. If the holders destroy the plant material upon termination of the right, such material will then not be available for comparison purposes. DAFF does not have facilities to maintain all the plant material of varieties which have been granted plant breeders' rights.

3.17 Compulsory Licences

A holder of a PBR has a limited period within which to exercise a sole right. A sole right means that the holder may undertake any activity in respect of the variety without issuing any licences to a third party. Upon expiration of the sole right period he may issue licensing. If the holder unreasonably refuses or imposes unreasonable conditions for the issuance of such a licence, the Registrar may issue a compulsory licence. Such a compulsory licence would only be issued when the Registrar is satisfied that the holder of the right is imposing unreasonable conditions on the issuance of a license, that the reasonable requirements of the public in terms of access to the variety is not being satisfied or will not be satisfied.

Currently, there is no guidance to the Registrar as to what would constitute “unreasonable refusal”, “unreasonable conditions” as well as “reasonable requirements of the public”.

4. Objectives

The objective of the plant breeders’ rights policy is to stimulate economic growth by:

- 4.1 Providing an internationally recognised system for plant variety protection
- 4.2 Ensuring the availability of plant varieties for South African agriculture.
- 4.3 Encouraging the participation of those previously excluded from economic activity by recognising their informal systems of innovation and creativity.
- 4.4 Encouraging the sustainable use and conservation of plant genetic resources for food and agriculture.

5. Policy to address the problem

5.1 Policy recommended to address the problem

Patents and the *sui generis* Plant Breeders Rights system differ significantly. In the case of *sui generis* systems, the eligibility requirements are less onerous but the scope of rights is rather narrow, whilst the eligibility requirements for patents are high and difficult to achieve with a broad scope of the rights. Considering, South Africa's developmental context, the *sui generis* system is considered most appropriate. Considerable evidence already exists indicating the advantages of managing an effective plant breeder's right system including increased access to foreign varieties and stimulus for further research and technology development.

5.2 Policy Instruments

In support of the recommended policy approach, the following instruments will be used for implementation thereof.

(i) Patents Act, 1978 (Act No. 57 of 1978)

In terms of this Act, a patent may be granted for any new invention which involves an inventive step and which is capable of being used or applied in trade, industry and agriculture. Anything which consists of a discovery, scientific theory, mathematical method, literary, dramatic, musical or artistic work or any aesthetic creation, a scheme, rule or method for performing a mental act, playing a game or doing business, a computer programme or the presentation of information are not considered an invention for purposes of this Act. The current Patent Act does not however, allow for "search and examination" as provided for in other international IPR legislation.

The Patents Amendment Act, 2005 (Act 20 of 2005) aims to provide for a disclosure requirement whether an invention in a patent application uses or is directly derived from an indigenous biological resource or genetic

resource, information regarding the nature and origin of such indigenous biological resource or genetic resources and whether the invention relied on any traditional knowledge or traditional use of the indigenous biological resource or genetic resources.

(ii) Plant Breeders' Rights Act, 1976 (Act No. 15 of 1976)

The objective of this Act is to provide for a system through which plant breeders' rights relating to varieties of certain kinds of plants may be granted and registered; for the requirements which have to be complied with for the granting of such rights; the protection of such rights and the granting of licences in respect of the exercise thereof; and other incidental matters. Although the Act is designed to offer protection and means of remuneration for plant breeders, it may not fully accommodate the developmental needs due to specific requirements of distinctness, uniqueness and stability. These criteria cannot be applied to the genetically heterogeneous plant varieties maintained by collective groups such as farmers and indigenous people.

Farmers' privilege to use farm saved seeds for non-commercial purposes are provided for in section 23 of this Act. This section stipulates that a farmer who on land occupied by him or her uses harvested material obtained on such land from propagating material that he or she legally obtained for purposes of propagation, will not be infringing on any plant breeders rights. To address the current deficiencies in the application and or exploitation of the farmer privilege, norms and standards should be developed on the limitation of the size of the farm and the farmer concerned as well as the category of crops.

To ensure access to propagating material of protected varieties and to engage in activities of propagation thereof, Section 26 of this Act

makes provision for compulsory licensing after expiration of the period of sole right and if it is found that the owner of the PBR unreasonably refuses to grant a licence to a third party or if such a holder is imposing unreasonable conditions for the issue of a licence. The National Authority will therefore develop the necessary guidelines and regulations for conditions to issue compulsory licences.

With reference to the infringements of rights; the holder of a plant breeders' right will be responsible for bringing legal action against any infringement of the holder's right. The National authority will cooperate with other relevant ministries, appropriate experts and other countries in the exchange of information on matters concerning the available mechanisms and corresponding remedies for the effective enforcement of plant breeders' rights. Where a plant breeders' right have been granted for a variety whose existence was a matter of common knowledge (lack of compliance to the distinctness requirement), breeders must defend their rights either by arbitration or by legal action in the civil courts.

(iii) The Indigenous Knowledge Systems (IKS) Policy

The Indigenous Knowledge Systems (IKS) Policy of the Department of Science & Technology aims to stimulate and strengthen the contribution of indigenous knowledge to social and economic development in South Africa. The main IKS Policy drivers in the South African context include:

- The affirmation of African cultural values in the face of globalisation – a clear imperative given the need to promote a positive African identity;
- Practical measures for the development of services provided by IK holders and practitioners, with a particular focus on traditional medicine, but also including areas such as agriculture, indigenous languages and folklore;

- Underpinning the contribution of indigenous knowledge to the economy – the role of indigenous knowledge in employment and wealth creation; and
- Interfaces with other knowledge systems, for example indigenous knowledge is used together with modern biotechnology in the pharmaceutical and other sectors to increase the rate of innovation.

(iv) The National Environmental Management Biodiversity Act 2004 (Act 10, 2004) and the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)

The overall management and conservation of South Africa's biodiversity is provided for in the Biodiversity Act within the framework of the National Environmental Management Act, 1998. The Act focuses on the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources.

From an agricultural perspective, the conservation of biological diversity is supported through the provisions of the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983). The Act is currently undergoing revision to ensure the sustainable utilisation of natural agricultural resources for the production of food and other produce to enhance food security in an environmentally sound manner. Although the Biodiversity Act also provides for the control of alien and invasive species, CARA specifically focuses on the control of alien plants and bush encroachers.

(v) International agreements related to plant variety protection

The global IPR system consists of a series of intersecting international agreements and institutions, including the World Trade Organisation (WTO) and the World Intellectual Property Organisation (WIPO).

The TRIPS Agreement

This agreement aims to protect and enforce intellectual property rights in order to promote technological innovation, the transfer and dissemination of technology, to the mutual advantage of producers and users in a manner that is conducive to social and economic welfare and to balance rights and obligations. The substantive obligations and discipline set forth in the TRIPS Agreement are now widely accepted in many IPR regimes. Article 27.3 (b) of the TRIPS agreement makes provision for the exclusion of the patentability of plants and animals other than micro-organisms, however, members to the WTO shall provide protection of plant varieties in one of three ways: *patents* or *sui generis* or combination of both.

International Union for the Protection of new varieties of plants (UPOV)

UPOV provides a framework for IPR protection of plant varieties. The Convention was signed in Paris in 1961 and entered into force in 1968. It was revised in 1972, 1978 and 1991. To be eligible for protection, the plant variety must be novel, distinct, stable, and uniform (in UPOV 1991) or homogeneous (in UPOV 1978). To be novel, the variety must not have been offered for sale or marketed, with the agreement of the breeder or his successor in title, in the country where the application for protection has been filed earlier than one year before that date, and earlier than six years for trees and vines, or earlier than four years for all other crops in any other country. To be distinct, the variety must be distinguishable by one or more characteristics from any other variety whose existence is a matter of common knowledge. To be considered

stable, the variety must remain true to its description after repeated reproduction or propagation.

According to both versions of the UPOV Convention, the breeder's right may be subject to two exceptions: the “breeders’ exemption” and the “farmers’ privilege”. The right of breeders both to use protected varieties as an initial source of variation for the creation of new varieties without authorization from the original breeder (the “breeders’ exemption”) is upheld in both the 1978 and 1991 versions. One difference is that the 1991 version states that the original breeder’s right extends also to varieties, which are *essentially derived* from the protected one. This prevents breeders from acquiring protection too easily for minor modifications of extant protected varieties. There is no reference in the 1978 version to the right of farmers to re-sow seed harvested from protected varieties for their own use (often referred to as farmers’ privilege). Thus countries that are members of the 1978 Convention are free, but not obliged, to uphold the farmers’ privilege. Parties to UPOV 1991 can continue to uphold the farmers’ privilege as long their national PBR system provides for it.

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

The ITPGRFA has the specific objective of facilitating access to plant genetic resources for food and agriculture (PGRFA) held by contracting parties and those in international collections, for the common good recognising that these are an indispensable raw material for crop genetic improvement, and that many countries depend on genetic resources which have originated elsewhere.

Article 9 recognises the enormous contribution of local and indigenous communities and farmers of all regions of the world towards the conservation improvement and providing access to these resources.

The realisation of farmers' rights is however, the responsibility of individual governments.

Under the Treaty, contracting parties have agreed to establish an efficient, effective and transparent Multilateral System to facilitate access to PGRFA and to share the benefits arising from the utilization of these resources in a fair and equitable manner.

Article 12.3(d) of the Treaty also prohibits any recipient of material accessed under the Multilateral lateral system to claim intellectual property or other rights which may limit the facilitated access to such PGRFA, or their genetic parts or components.

The Convention on Biological Diversity (CBD)

CBD principles most relevant to biological resources and IPRs can be summarised as:

- (i) States have sovereign control over the biological resources within their borders and shall ensure conservation and sustainable use of their biological resources;
- (ii) although States shall have the authority to control access to their biological resources, they shall endeavour to create conditions that facilitate such access;
- (iii) such access shall be granted on mutually agreed terms and subject to the prior informed consent of the party providing such access;
- (iv) the benefits of commercial or other utilisation of genetic resources shall be shared in a fair and equitable way with the party providing such access;
- (v) the wider application of the knowledge, innovations and practices of indigenous and other local communities shall be conducted with the approval and involvement of the holders of such knowledge.

- (vi) contracting parties shall, subject to national legislation and international law, cooperate to ensure that IPRs are supportive of and do not run counter to the objectives of the CBD.
- (vii) provisions of the CBD will not affect rights and obligations of countries to other existing international agreements, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity.

5.3. Institutional arrangements

(i) National Authority on plant breeders' rights

A plant variety has to be registered before the protection can be granted. This requires a national authority to examine applications and decide on such applications. The national authority will comprise the Registrar, together with adequate support personnel. Where required, the national authority may cooperate with relevant experts and institutions (national and international) to either perform "DUS" tests or consideration of additional relevant information. All such reference resources will be independent and not involved in any commercial breeding activities.

The National Authority will also maintain an administratively transparent and fair system on all matters related the administration of the plant variety protection system.

Considering the cross-cutting nature of legislation involving plant material, the administrative system and processes of the National Authority will seek to ensure mutual support and compliance to such legislation.

(ii) Establishment of an Advisory Body

An Advisory Body will be established to advise the Registrar on any technical matter relevant to plant variety protection. This body will

include individuals with the competence in, but not limited to: the breeding industry, consumer protection, conservation and sustainable use of plant genetic resources matters, indigenous knowledge systems, etc.

(iii) Maintenance of plant material for DUS tests

Material to be subjected for DUS analyses will be transferred to the national authorities or maintained by the breeder on behalf of the National authority according to the terms of a standard material transfer agreement.

The National Authority may enter into agreements with breeders and relevant institutions as well establish field reference collections (Gene Banks) to maintain material after the expiration of a PBR. Such material will serve as reference material for future plant variety evaluations.

(iv) DUS Testing

The national authority will carry out DUS tests or may purchase such test results; this approach avoids disputes among breeders after the granting of rights. The national authority may however, determine the terms and conditions where breeders may set up trials or where such tests may be conducted by regional or international cooperation.

5.3.1 Extension of protection to all genera and species

Considering developments in plant breeding and use of plant species beyond food and fibre and the economic contribution of such alternative uses, protection is extended to all genera and species.

5.3.2 Recognition of the contribution of farmers to plant genetic diversity

Different approaches exist to recognize and reward farmers for their contributions to plant genetic diversity. The first approach involves situating the traditional practices of farmers as exceptions to the exclusive rights of plant breeders under existing IPR laws, in other words, breeders are precluded from demanding payment from farmers who engage in certain farming practices, such as saving seeds and planting seeds saved from prior purchases, or informally exchanging seeds. A second approach involves acknowledging farmers through benefit sharing mechanisms, such as financial payments and technology transfers. A third approach is to develop plant variety protection regimes which recognize their heterogeneous plant varieties.

In South Africa, farmers are allowed to use farm saved seeds of protected varieties for own use. However, exchange of such seeds is prohibited. Farmer's Rights are also upheld further through the DAFF's Programme on Conservation and Sustainable use of plant genetic resources. The aim of this programme is to maintain the genetic pool of landrace material through active collection, characterization and storage of such landrace material. A key component of this programme is the systematic documentation of Indigenous Knowledge as part of the passport data. This approach is also complemented by community-based in situ or on-farm conservation projects.

5.3.3 Promoting and increasing plant breeding activities at public institutions

The development of a new plant variety requires significant investment in research. If such development is undertaken at public research institutions, government may determine the terms of protection, the conditions of restrictions and exemptions. In this manner, access to plant varieties, especially those important for food security, can be

ensured. On the other hand, plant variety protection may also be a source of income for public research institutes involved in plant breeding. To achieve and sustain such research activities, it is important for scientists to have access to locally developed technologies and those developed elsewhere (which may be protected by IPR).

5.3.4 Human resources development and capacity building

The issues related to intellectual property rights are extremely complex. Globally, developing countries (including South Africa) are increasingly challenged to engage coherently with the various international bodies focusing on intellectual property rights. It is therefore important for the Department to maintain an adequate level of expertise in the field as well as provide the required legal support for new entrant plant breeders, particularly those previously excluded from economic activity.

Human resource development should also focus on strengthening technical capacities required for DUS testing. The technical activities under the UPOV system are dealt with by different Working Groups, namely the Technical Working Parties for Agriculture (TWA), Fruit Crops (TWF), Ornamentals (TWO), Vegetable Crops (TWV), Automation and Computer Programs (TWC) and Biomolecular and Molecular Techniques and DNA profiling. Officials from the national authority should engage and interact with these working groups in a structured and coordinated manner.

5.3.5 Bilateral, regional and multilateral agreements and arrangements

Regional co-operation can be used to assist countries with limited technological capacities to perform DUS testing or evaluate such test results. It may also be used to achieve more rapid release of protected varieties. Such bilateral, regional and multilateral agreements and arrangements regarding plant variety protection and or plant variety release should however be consistent with the objectives of this policy

and not result in a lower level of plant variety protection than that provided for by the domestic legislation.

5.3.6 Plant variety protection of unimproved plant material

No plant variety protection shall be granted for wild plant varieties or germplasm. In granting any plant breeders' right, the national authorities shall refer to as many as possible sources to determine whether any material in question is in the public domain, in South Africa or in any other country.

6. Performance indicators

Table 1: Performance indicators and monitoring and evaluation

Objective	Indicator	Monitoring and evaluation
Amendment of the Plant Breeders' Rights Act, 1976 (Act No. 15 of 1976)	Plant Breeders' Rights Amendment Bill	Cabinet approved bill
Effective protection of plant varieties	Number of protected plant varieties	Annual reports
Establishment of PBR Advisory Committee	Established PBR Committee	Annual reports
Increase in the number of available plant varieties	Published plant varieties	Quarterly report

7. Implementation Strategy

Consultation on the draft Plant Breeders' Rights Policy will proceed through sourcing of comments from the interested and affected parties. This will include two provincial workshops.

Expression of the policy through relevant legislation will include the amendment of the Plant Breeders' Rights Act of 1976 and the Regulations to the Act. Other policy initiatives to support the sustainable use and conservation of plant genetic resources, recognition and protection of Indigenous Knowledge, regulating access to plant genetic resources, etc. are already in place.

Various international conventions and or agreements are also relevant to the protection of plant varieties. These include, amongst others, UPOV, CBD, WIPO etc. The DAFF already participates in the various

governance and implementation structures as part of its obligations under such conventions/ agreements. At the domestic level, various interdepartmental structures (e.g. the IKS Inter-departmental Committee) have been established to conduct inter-sessional preparations and consultations. In this manner, DAFF attempts to participate in all relevant conventions/ agreements in a coherent manner.

Following consultations, the Terms of Reference and potential candidates for the Advisory Committee will be submitted for approval to the Minister.

Guideline documents and relevant databases will be developed to ensure the current regulatory framework supports this policy.

8. Reference documents

Indigenous Knowledge Systems Policy *Department of Science & Technology*

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9. Policy owner

9.1 Programme: Production and Resource Management

Directorate: Genetic Resources