



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, resistance to disease and drought tolerance. Over extended periods of time, 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.

Considering the labour and resource intensities associated with breeding a new variety, legal protection of these “properties” became necessary. Although approaches varies amongst different countries, the Plant Breeders’ Rights system is the most common system used to afford protection to new varieties of plants. 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.

In South Africa, plant breeders’ rights are recognized and protected under the Plant Breeders’ Rights Act 1976 (Act no. 15). The implementation of plant breeders’ rights system in South Africa has been a major stimulus for the plant breeding industry. Not only does it provide for financial remuneration, but it also gives local plant breeders and producers access to high quality new varieties from foreign countries. Foreign owners of varieties are not keen to supply propagating material to individuals in other countries, if such material cannot be protected by plant breeders’ rights. It is of the utmost importance for the economy to obtain new and improved plant varieties as there is a constant demand for better quality, higher yields, better processing properties, increased disease and pest and drought resistance. If plant breeders’ rights were not available locally, very few new varieties from foreign countries would be available in South Africa. This would impact negatively, amongst others, on the export market, as we would not be able to produce the new, sought after varieties.

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. To be eligible for protection, plant varieties, must be novel, distinct, stable and uniform. 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)

In addition to the UPOV Convention, other international instruments also relate to intellectual property rights on genetic resources including: 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). This complexity presents a significant challenge for many developing countries to engage in these fora in a coherent manner.

Some of the concerns or challenges often associated with PBR regimes include: the contribution of such regimes in the centralization of research as oppose to research tailored to respond to specific local environmental and socio-economic conditions, privatisation of genetic material (needed for further research) in the hands of a small number of multinational corporations, and the decline of public sector research. Arguments are often extended to raise concerns about potential impacts on biodiversity (through genetic erosion) and food security.

The domestic legal system which governs plant variety protection in SA is positioned within the global sphere of intellectual property rights regimes (most of which SA is a Party to) with different objectives. It is therefore important to ensure that SA participates and engages in the relevant fora in a coherent manner. Although the benefits of a plant variety system (as outlined above) needs no further emphasis; it is important that potential tensions (the disadvantages) are managed appropriately to ensure that South Africa's developmental objectives are met.

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 or grantee.

Discover and develop: discovery of a plant in the wild or of a mutation in cultivated crops, together with their use in selective propagation to develop a new variety. Selective propagation is an outcome demonstrated by distinctness, uniformity and stability of the new variety.

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)

Indigenous Knowledge (IK): According to UNEP, IK can be broadly defined as the knowledge that an indigenous (local) community accumulates over generations of living in a particular environment.

Landrace: An early, cultivated form of a crop species, evolved from a wild population, and generally composed of a heterogeneous mixture of genotypes.
(According to FAO)

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): Form of intellectual property 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.

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
UNEP:	United Nations Environment Programme
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.

The utilization of PGRFA (which includes landrace material) 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 may be 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. It has been argued that, on the contrary, plant genetic diversity is eroded rather than enhanced by the granting of plant breeders' rights. It is posited that the strengthening of IPRs result in a loss of *in situ* agricultural biodiversity. This follows from the hypothesis that the 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) unauthorised stocking and/or processing for the purposes of propagation
- (v) production outside the protected area and unauthorised import into the protected territory.
- (vi) 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 Abuse of the Farmers' Privilege Provision

Farmers' privilege to use farm saved seeds for non-commercial purposes is provided for in section 23 of the Plant Breeders' Rights Act, 1976. 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. 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. Other concerns raised with regard to the farmers' privilege provision include: exploitation by commercial farmers resulting in collapse of some breeding programmes, application of the farmers' privilege to vegetatively propagated crops, use of one-sided contracts by breeders who want to bypass the farmers' privilege, etc.

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) 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 in another 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) and the Conservation of Agricultural Resources Act (CARA), 1983 (Act no. 43).

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. It is not clear in the Act, in its current form, what constitutes the effective filing date. Also, currently, only original signed documents are accepted for filing a Plant Breeder's Right 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.

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

The technical requirements for granting plant variety protection for a variety that has been genetically modified is also a concern as many of the genetically modified varieties do not present a different phenotype than its conventional counterpart. In most instances, differences can only be detected through molecular testing. Globally, there is no agreement on the discriminatory powers, reliability and reproducibility of these techniques.

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.

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. 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. Although the Act does provide for applicants to apply for extensions to supply plant material, the terms and conditions for such extensions are not stipulated in the Act. This leads to applicants supplying the plant material for DUS evaluations up to 20 years after the initial filing date.

3.15 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.

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. 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. The holder is not entitled to make available plant material after the right has expired. This poses a problem as 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 objectives of the plant breeders’ rights policy is to:

- 4.1 provide an internationally recognised system for plant variety protection
- 4.2 stimulate economic growth by ensuring the availability of plant varieties for South African agriculture.
- 4.3 contribute towards 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. It is possible to have a plant breeder's right protection as well as the patent protection for the same variety. Patents however, tend to protect components of a variety, such as gene sequences. 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 no 20) 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)

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. The scope of the right is defined to restrict any unauthorised use of the protected material which may prevent the right holder from reaping financial reward. However, this right does not limit the use of the protected variety for private and non-commercial purposes, experimental use and the breeding of new varieties (except where essentially derived varieties are concerned). Farmers are also permitted, on their own farms, to use part of their harvest of a protected variety for the planting of a further crop.

To address the current deficiencies in the application and or exploitation of the farmer privilege, the National Authority will develop norms and standards and may include consideration of the size of the farmer and its enterprise and 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.

The holder of a plant breeders' right will be responsible for defending his/ her rights against infringement through available legal remedies (e.g. arbitration or by legal action in the civil courts). The National Authority will maintain information relevant to a grant of a PBR which may assist the right's holder in such legal action and may set up appropriate fines in cases of intentional or reckless infringement.

The National Authority will cooperate with other relevant ministries, government assignees, relevant industry bodies, appropriate experts and other countries:

- in the exchange of information on matters concerning the available mechanisms for effective enforcement of plant breeders' rights
- regarding corresponding remedies to address infringement effectively

(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 no 10) and the Conservation of Agricultural Resources Act, 1983 (Act no 43)

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 no 43). 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. The necessary physical infrastructure will also be provided for in order to execute the DUS tests and relevant functions. Where required, the national authority may liaise with relevant experts and institutions (national and international) to strengthen the domestic plant variety protection framework.

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

In the light of overwhelming use of electronic media and to further streamline the administrative processes, the National Authority will explore and, where appropriate, accept applications submitted electronically through a dedicated portal. This will be conducted in line with the relevant provisions of the Electronic Communications and Transactions Act, 2002 (Act no 25).

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 identified technical matters 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) Submission and maintenance of plant material for DUS tests

The National Authority will determine the time period (having due regard for the specific crops) within which plant material should be submitted for evaluation. Requests for extensions will only be considered if the applicant can provide proof that the material has been imported into the territory of SA.

The National Authority may enter into agreements with breeders and relevant institutions to 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 at its pre-determined premises or may purchase such test results from other UPOV member countries or evaluate trials set up at breeders' premises. The latter would be informed by terms and conditions determined by the National Authority.

5.3.1 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.

5.3.2 Alteration of variety denominations

Alteration of denominations would only be considered at the request of the applicant but limited to the time before the plant breeder's right is granted. Amendments of approved variety denominations after this period would only be made by the Registrar on the order of a court or if new information becomes available, which, if discovered earlier, would have resulted in the refusal of an approved denomination.

5.3.3 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. It is envisaged that in future, protection in terms of the Plant Breeders' Rights Act will be extended to all genera and species.

5.3.4 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.

5.3.5 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).

5.3.6 Awareness

The National Authority will in collaboration with relevant governments departments, industry groupings, etc. manage a programme on public awareness of plant variety protection. Such a programme will include publication of administrative actions/ decisions on plant breeders' rights applications, general information to support compliance, outcomes of impact studies, etc.

5.3.7 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 (including biomolecular techniques and methodologies).

Regulatory support will also be made available to new entrant plant breeders (seeking protection of their varieties), particularly those previously excluded from economic activity.

Human resource development should also focus on strengthening technical capacities required for DUS testing. The technical activities (development of relevant test guidelines) 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.

5.3.8 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
Increased Awareness of PBR matters	Information materials	Quarterly publications

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.

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

8. Reference documents

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Modern Varieties and Agricultural Biodiversity. AUR working paper series no. 3. 2006.

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9. Policy owner

9.1 Programme: Agricultural Production, Health and Food Safety

Directorate: Genetic Resources