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THE NOTION OF BREEDER AND COMMON KNOWLEDGE

Document prepared by the Office of the Union

1. At its forty-first session held in Geneva on April 6, 2000, the Administrative and Legal Committee (hereinafter referred to as "the Committee") considered the "Notion of Breeder" on the basis of document CAJ/41/2.

2. Discussions in the Committee suggested that most delegations considered that the draft position set out in Annex I to document CAJ/40/2 accurately represented and explained the principle of the UPOV Convention concerning the notion of "breeder." Other delegations placed emphasis upon the political sensitivity of the subject.

Political Sensitivity

3. The UPOV Convention establishes internationally harmonized principles governing the grant of an intellectual property right to a person in respect of certain defined plant material which satisfies its definition of variety. The Convention does not require the granting to that person of a positive right to exploit the protected variety. On the contrary, the Convention requires that certain specified acts with certain specified material of the variety may be carried out only with the authorization of the holder of the intellectual property right. Other persons are *excluded* from carrying out the specified acts if they do not have the holder's authorization. The breeder's right is accordingly often described as an "exclusionary right."

4. In addition to establishing the minimum scope of this exclusionary right the Convention also specifies that the breeder's right shall be independent of any measures taken to regulate the production, certification and marketing of material of varieties or the importing or exporting of such material (Article 18 of the 1991 Act). This provision leaves wide scope for member States to regulate the trade in material of protected varieties by requiring, for example, the evaluation of plant varieties and their additions to a national list before they can be marketed, or the satisfying of regulations concerning the release of genetically modified organisms into the environment.

5. The formulation of the breeder's right as an exclusionary right and the freedom of member States to regulate means

(a) that the authorization of some other person in addition to the breeder may also be required (for example a patentee or the holder of the breeders right in a variety from which the variety is essentially derived) before the variety can be commercially exploited, and

(b) that a State may establish many different types of regulations which must be satisfied before a variety may be exploited.

Accordingly, so far as the UPOV Convention is concerned, there is no impediment to the existence within national laws of regulations concerning the origin of plant material that must be satisfied before a variety can be exploited or of rights over categories of plant genetic resources in favor of "farmers," "communities" or of a local or the national government. The right granted to the breeder pursuant to a plant variety protection law based on the UPOV Convention complements, and is not inevitably in opposition to, any such system of regulations or rights.

6. The system of protection of the UPOV Convention is designed to provide an incentive to breed or to discover and develop new plant varieties. Hopefully such varieties will embody "improvements" which will be of benefit to the public, but improvement in this sense is not a condition for the grant of protection. It has been suggested that a variety, which is discovered (selected) in the wild and propagated/evaluated/unchanged, should not be eligible for protection because of the "politically sensitive" nature of the initial variation from which it has been developed. Should the position be different if the relevant collection of plant material was made with the prior informed consent of the relevant genetic resource authority and/or subject to an agreement concerning the fair and equitable sharing of the benefits of exploiting the variety? It might well be that no definable benefits would come into existence in the absence of a plant variety protection right.

7. Countries which are preparing national plant variety protection laws for the first time are sometimes tempted to add an additional condition for the grant of protection, for example, that the applicant possesses the prior informed consent of a plant genetic resource authority. The Office of UPOV explains in such cases that the addition of such a condition to a grant of protection will not fulfill its objective of preventing the sale of such a variety since the variety can still be marketed without the benefit of protection. Only an appropriate regulatory embargo on sales would fulfill the objective of preventing the sale of such varieties.

8. It is the duty of UPOV member States to grant protection when the criteria for the grant of protection are fulfilled and not to refuse protection on the basis of criteria that have never been part of the Convention and which would remove the incentive of protection from some classes of plant improvement activity. This does not mean that the Convention is insensitive

to the concerns arising from the application of the principles of the Convention on Biological Diversity or the International Undertaking on Plant Genetic Resources. In the application of the texts of the 1991 Act, the following features should be noted:

(a) Article 1(vi) - Definition of variety

This is broadly drawn; plant groupings which do not satisfy the requirements for protection, e.g. some landraces, may still be varieties which are a matter of common knowledge for distinctness purposes.

(b) Article 7 – Distinctness

In ensuring whether the existence of a variety is a matter of common knowledge, it is open to member States to define "common knowledge" widely or narrowly. A narrow definition might limit varieties of common knowledge to those for which a full botanical description is available or which are included in a reference collection. A wide definition would include varieties which are known to a community or group anywhere in the world. The normal rules of evidence would be used to determine whether a particular plant material was a matter of common knowledge in this sense. [It is not suggested that common knowledge in this sense should invariably be satisfied when establishing reference collections or granting protection; the suggestion is simply that the knowledge of communities in the developing world is as relevant as any other source of knowledge, provided that it is credibly substantiated. Such knowledge should be taken into account for the purpose of demonstrating in nullity proceedings that a variety was not novel at the time that protection was granted.]

(c) Technical Questionnaires – Breeding History

It is open to UPOV member States, if necessary, to strengthen technical questionnaires concerning the genetic background to candidate varieties and to ensure that relevant information is publicly available. It might be useful to make such information available on UPOV ROM as well as variety descriptions.

9. It was suggested in the forty-first session of the Committee (see paragraph 9 of the draft Report document CAJ/41/9 Prov.) that, once a description of a genetic resource is available, that description should be taken into account as a part of "common knowledge." This suggestion is helpful, but it should be noted that the resource in question must constitute a "variety," it must "exist" and it will be necessary to take steps to ensure that descriptions are prepared on an internationally harmonized basis and are accessible. If UPOV ROM is further developed to include variety descriptions, it could play an important role in some such future world system.

10. Particular care should be taken when considering whether gene bank accessions are a matter of common knowledge. If the material in question is segregating or if it is a highly variable population, breeders should be encouraged to select within it, subject to observing the terms of any Material Transfer Agreement (MTA).

The Importance of Variability

11. In the forty-first session of the Committee, the Chairman of the Technical Committee stressed the importance of there being variation in any wild material which becomes the basis of a variety (see the draft Report of the session, document CAJ/41/9 Prov. at paragraph 20). It is suggested that there is support for this observation in the language of Article 6(1)(a) of the 1978 Act, the relevant part of which reads as follows:

> "Whatever may be the origin, artificial or natural, of the initial variation from which is has resulted, the variety must be clearly distinguishable by one or more important characteristics from any other variety whose existence is a matter of common knowledge at the time when protection is applied for."

These words lend support to the notion that to constitute discovery there should be a minimum of variation from within which a selection or selections have been made. If there is no selection from within variation then for the purpose of the UPOV Convention, it is suggested there is no protectable discovery. In this context, it is further suggested that the propagation of the unchanged material selected from within variation and its evaluation constitutes "development" for the purpose of the 1991 Act.

The Discovery of a New Species in the Wild

12. It is suggested that the principle described in paragraph 11 should also apply to the discovery of a new species unknown to botanists. If the species is comprised of a single plant type, and there is no variability, it will not constitute "a plant grouping within a single botanical taxon of the lowest known rank" so as to constitute a "variety" as defined in Article 1(vi) of the 1991 Act. If, on the other hand, a candidate variety is selected from variation within the newly discovered species it is suggested that it would be protectable.

The Draft UPOV Position Statement

13. The Annex contains a fresh draft of the proposed UPOV position statement with additions designed to take account of discussions in the forty-first session of the Committee. The additions are reproduced in bold type.

14. The Office of the Union recognizes that it will not be appropriate to finalize the proposed position statement until cognate matters in the revised General Introduction are also settled.

[Annex follows]

ANNEX

THE NOTION OF BREEDER IN THE PLANT VARIETY PROTECTION SYSTEM BASED UPON THE UPOV CONVENTION

The Aims of Plant Variety Protection

1. The protection of plant varieties was primarily conceived with a view to the development of agriculture. That aim is set out as follows in the preamble to the original 1961 text of the UPOV Convention:

> "The Contracting States,
>
> "Convinced of the importance attaching to the protection of new varieties of plants not only for the development of agriculture in their territory but also for safeguarding the interests of breeders […]"

The Technical Bases for Plant Breeding and the Protection of New Plant Varieties

2. The subject matter of the protection system is, in all cases, a variety, that is to say a plant grouping within a single botanical taxon of the lowest known rank, such grouping being defined on the basis of agro-botanical criteria and characterized by the fact that it is distinct from other groupings and is sufficiently uniform and stable. The notion of variety covers a genetic structure theoretically corresponding to a single genotype (clone, line, F_1 hybrid) or a particular combination of genotypes (complex hybrid, synthetic variety, population variety, etc.).

3. The objective of plant breeding (plant improvement) is to produce such genetic structures. To do so, it must always start from genetic variability, which may be already existing or created.

Background

4. The invitation to participate in the first session of the International Conference, held in Paris from May 7 to 11, 1957, that was to lead to the signing of the UPOV Convention on December 2, 1961, was accompanied by an "Aide-mémoire on issues arising from the protection of new plant varieties" that had been drafted by the State Secretariat for Agriculture of France, and which asked *inter alia* the following questions as the basis for discussion in the Conference:

> "1. Is it desirable to grant to every person who is able to prove that he is the first to bring a new variety of plant into cultivation, a right analogous to that which is accorded to the person making an industrial invention?
>
> "2. Should the right granted to [this person] the "*obtenteur*" be limited or unlimited in time?
>
> "3. The following are generally considered as sources for the "*obtention*" of new varieties of plants:

(a) bulk or pedigree selection within an existing population;
(b) the discovery of a natural mutation;
(c) the inducing of an artificial mutation using a specific method;
(d) chance cross-polination;
(e) deliberate cross-pollination;
(f) any combination of the above methods.

"Should one consider as true creations only those *obtentions* which result immediately and directly from a process acting on the genetic structure of the plant or should the concept be broadened?"

In the first session, delegates opted to adopt a broad interpretation of *obtention* without regard to the method of *obtention*. What mattered was the result achieved, which should be different from what was previously known. Delegates contrasted the proposed plant variety protection system, in which discoveries should be protectable, with the patent system, which protected inventions but not discoveries. It was necessary to devise a special (*sui generis*) system in order to encourage all forms of plant improvement including discoveries.

5. Paragraph 4 of the Final Act of that session stated that

"The Conference considers that, since the essential work of the *obtenteur* is that of improvement, protection should apply whatever the origin (natural or artificial) of the initial variation that eventually results in the new variety."

6. Subsequent sessions of the Committee of Experts set up by the first session of the Conference repeatedly studied the same subject. It noted that the reference to "improvement" in paragraph 4 of the Final Act did not imply that the grant of protection should be conditional upon the value for cultivation and use of the variety. The Committee also endeavored to identify an element of creative activity that should exist before the obtenteur would be entitled to protection. The possibilities of restricting protection to the fruits of "creative selection work" or "effective work on the part of the breeder" were proposed.

7. To some extent the subject was complicated by the language used. "Obtenteur" in French means a person who achieves a result particularly as a result of trials or research. It is usually translated into English as "breeder." "Breeding" in its strict sense connotes a process involving sexual reproduction as a source of variability but in practical usage the activity of plant breeding is much wider and includes, in particular, selection within pre-existing sources of variation. "Obtenteur" might be better translated into English as "plant improver" rather than breeder (subject to the reservation referred to above that "improvement" is not a condition of protection).

8. Perusal of the early chapters of Allard's classic "Principles of Plant Breeding" establishes that he considered all the methodologies described in the French *Aide-mémoire* to be part of the activity of plant breeding. [Allard would also have included "plant introduction" (the simple multiplication and testing of an existing variety in a different environment) as an appropriate activity for plant breeders. Such an activity was not listed as a source of *obtention* in the *Aide-mémoire*. It is clear that the "introducer" of a variety is not entitled to protection under the UPOV Convention since the introduced material will not be distinct from the existing known variety.]

9. It is also clear that, when the text of the UPOV Convention was eventually adopted in 1961, it established a system that was intended to provide protection for the fruits of all forms

of plant improvement, including selections made within natural, that is to say, pre-existing variation. Discoveries accordingly became eligible for protection as selections made within natural sources of variation.

The Text of the 1961 and 1978 Acts

10. The notions of "effective breeding work" or "creative selection" were not maintained by the second session of the International Conference that adopted the 1961 Act of the Convention, of which the principles and language were substantially maintained in the 1978 Act. The relevant provisions of the 1978 Act are as follows:

(a) Article 1(1):

"The purpose of this Convention is to recognize and to ensure to the breeder of a new plant variety or to his successor in title […] a right under the conditions hereinafter defined."

(b) Article 5(3):

"Authorization by the breeder shall not be required either for the utilization of the variety as an initial source of variation for the purpose of creating other varieties or for the marketing of such varieties. […]"

(c) Article 6(1) (a):

"Whatever may be the origin, artificial or natural, of the initial variation from which it has resulted, the variety must be clearly distinguishable by one or more important characteristics from any other variety whose existence is a matter of common knowledge at the time when protection is applied for. Common knowledge may be established by reference to various factors such as: cultivation or marketing already in progress, entry in an official register of varieties already made or in the course of being made, inclusion in a reference collection, or precise description in a publication. The characteristics which permit a variety to be defined and distinguished must be capable of precise recognition and description."

11. It should be noted that the 1978 Act contains no definition of "breeder" or "breeding" so that these words have their natural meaning and include all the classes of activity included in the French A*ide-mémoire*. There is equally no express reference to the protection of "discoveries." The protection of discoveries is inferred from the fact that the opening words of Article 6(1)(a) accept the possibility that the variety may result from a natural source of initial variation, for example, a mutation.

12. The fathers of the UPOV Convention therefore deliberately chose to open up the system of protection to all varieties, whatever their method of breeding (therefore including the varieties that are "discoveries"), and whatever the effort expended by the breeder to create the variety. The language of the Convention establishes that there should have been a source of variability, which may have been created by the breeder or be pre-existing and that the breeder's selection must be clearly distinguishable from any other commonly known variety.

13. The UPOV Convention differs from the patent system in its treatment of discoveries. Discoveries are not patentable. This difference is the logical result of the aim of the Convention which is to secure the development of agriculture. The "discovery" of mutations

or variants in a population of cultivated plants is indeed a source of varieties of great economic importance for agriculture. The UPOV Convention would have failed in its mission if it had excluded such varieties from protection and withheld from discoverers the incentive to preserve and propagate useful discoveries for the benefit of the world at large. The United States Congress adopted the same approach in 1930 when it made the plant patent available to "whoever invents or discovers and asexually reproduces any distinct and new variety…"

14. It is important to emphasize the language used at the beginning of Article 6(1)(a): "Whatever may be the origin, artificial or natural of the initial variation for which it has resulted ...". The language implies a need for variation and for selection within that variation in order that the resulting plant material be the basis of a protectable plant variety.

The Text of the 1991 Act

15. When the Convention was revised in 1991, notwithstanding the fact that the making of selections within pre-existing variation was regarded as a standard activity for plant breeders, it was thought to be useful to include a definition of breeder in order to emphasize the fact that the UPOV Convention also provided protection for varieties that had been "discovered". However, at the Diplomatic Conference, attention was drawn to the fact that the apparent protection of bare discoveries could be controversial in circles concerned with the definition of the ownership rights in genetic resources. Delegates were, however, conscious that, in practice, a discovery must be evaluated and propagated before it can be exploited and that the making available of discoveries was an important source of plant improvement that must be encouraged by the UPOV Convention. Intensive discussion led to the definition of "breeder" as the person who "bred, or discovered and developed" a variety. The reference to the "origin," artificial or nature of the initial variety from which [the variety] has resulted in Article 6(1)(a) of the 1978 Act no longer appears. In the 1991 Act "discovery" describes the activity of "selection within natural variation" while "development" describes the process of "propagation and evaluation."

> [Note: It has been suggested in one member State that the criterion of "development" is only satisfied if the discovered plant itself is subsequently changed in some way and that the propagation of the plant unchanged would not constitute "development." This approach would require the discovered plant to be propagated sexually and for a selection to be made in the progeny in order to demonstrate development. It is suggested that this approach cannot be correct since selection in the progeny would constitute "breeding." This approach would also deny protection to most mutations, since the mutation is usually propagated unchanged.]

16. The definition of breeder has made it possible to simplify the provision setting out what is meant by distinctness. The relevant provisions of the 1991 Act therefore read as follows:

(a) Article 1(iv):

"For the purposes of this Act:

[…]

(iv) "breeder" means
– the person who bred, or discovered and developed, a variety,"
[…]

(vi) "variety" means a plant grouping within a single botanical taxon of the lowest known rank, which grouping, irrespective of whether the conditions for the grant of a breeder's right are fully met, can be
- defined by the expression of the characteristics resulting from a given genotype or combination of genotypes,
- distinguished from any other plant grouping by the expression of at least one of the said characteristics and
- considered as a unit with regard to its suitability for being propagated unchanged

(b) Article 7:

"The variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application. […]"

(c) Article 15(1)(iii):

"The breeder's right shall not extend to

[…]

"(iii) acts done for the purpose of breeding other varieties and, except where the provisions of Article 14(5) apply, acts referred to in Article 14(1) to (4) in respect of such other varieties."

The Administrative Operation of the System of Protection

17. Protection is therefore available to the person(s) who claim(s) to be the breeder(s) of a variety, irrespective of its mode of creation. The breeder is usually required in a technical questionnaire that accompanies his application for protection to provide information concerning the breeding history and genetic origin of the variety.

18. In a very large number of States, an applicant who claims to be the breeder is assumed to be the owner of the right to protection, unless proved otherwise (only the successor in title is required to prove his title). The administrative procedure for the grant of protection typically includes a series of measures enabling concerned persons to rebut this assumption. These measures particularly include publicity (publication of a gazette, public inspection of files) and the possibility of filing observations, objections or opposition or, where a title has already been granted, of instituting an administrative or judicial procedure for annulment or judicial transfer.

19. A fundamental feature of the UPOV Convention, now embodied in Article 12 of the 1991 Act, is that protection shall only be granted after an examination to determine if the variety is novel, and clearly distinguishable from all other varieties that are a matter of common knowledge. The system of plant variety protection based on the UPOV Convention seeks to ensure, save error or omission on the part of the administrative services, that all varieties protected in the system are clearly distinguishable from all other varieties whose

existence was a matter of common knowledge at the date of the application for protection. Each variety is also given a detailed description drawn up in accordance with standardized procedures and protocols.

20. Article 6(1)(a) of the 1978 Act (see paragraph 10) did not define "common knowledge" but provided a non-exhaustive list of examples of how a variety could become a matter of common knowledge. When the Convention was revised in 1991, it was noted that the list of examples included events which would not necessarily be known to the public, for example, the addition of a variety to a reference collection. Accordingly, the 1991 text leaves "common knowledge" undefined and specifies only that certain acts (which are not likely to be known to the general public) shall be deemed to render varieties a matter of common knowledge. "Common knowledge" has its natural meaning. It is a worldwide test. A variety that is a candidate for protection must be clearly distinguishable from any variety that is a matter of common knowledge anywhere in the world. [Reference should be made to the revised General Introduction to the Assessment of Distinctness, Uniformity and Stability in New Varieties of Plants (document under preparation) to ascertain how this requirement is approached in practice.] [For the guidance of its member States, the Council of UPOV has published recommendations giving examples of the circumstances in which varieties should be considered to be a matter of common knowledge.[*]]

21. The definition of "variety" introduced in Article 1(vi) of the 1991 Act plays an important role in this context. The words "irrespective of whether the conditions for the grant of a breeder's right are fully met" makes it clear that commonly known varieties which are not clearly distinguishable from other known varieties, sufficiently uniform and stable so as to qualify technically for protection are still varieties from which a candidate variety must be clearly distinguished. This means, for example, that land races which are capable of satisfying the definition of "variety," and which can in consequence be defined and propagated unchanged should be regarded as varieties of common knowledge for distinctness purposes.

22. In applying the notion of common knowledge in cases of dispute and particularly applications for a declaration of nullity, UPOV member States are recommended to be prepared to take into account not only knowledge that exists in documented form, but also the knowledge of relevant communities around the world.

The Effect of the UPOV Protection System

23. The effect of a grant of protection in conformity with the UPOV Convention is that the authorization of the holder of the protection right is required before acts of exploitation can be effected with material of the variety. The grant of protection should not give to the holder or his licensee a positive right to exploit the variety; it is open to UPOV member States to regulate the exploitation of varieties being part of a genetic resource falling within the provisions of Article 15 of the Convention on Biological Diversity where the prior informed consent of the person providing the resource has not been obtained.

24. Since the UPOV Convention was created in 1961, it is thought that some 100,000 grants of protection have been made in UPOV member States. Some 9,000 grants of protection per

[*] The Committee may wish to consider the usefulness of such recommendations.

annum are currently made. Certain organizations unsympathetic to the system of intellectual property rights have alleged that the UPOV system of plant variety protection permits or encourages the improper taking of plant material and its use as the basis for securing plant variety protection in UPOV member States. These allegations have not been substantiated.

25. The UPOV protection system seeks to protect varieties resulting from the various forms of plant improvement activity which have been of such benefit to humanity, particularly over the last century as an understanding of plant genetics has grown. The member States of UPOV emphatically reaffirm the notions of "breeder" and of activities which may legitimately result in the breeding, or discovery and development of a protectable variety outlined in this paper.

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