



CAJ/41/2

ORIGINAL: English

DATE: February 9, 2000

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

ADMINISTRATIVE AND LEGAL COMMITTEE

Forty-First Session
Geneva, April 6, 2000

THE NOTION OF BREEDER

Document prepared by the Office of the Union

1. At its fortieth session held in Geneva on October 18, 1999, the Administrative and Legal Committee (hereinafter referred to as "the Committee") considered the "Notion of Breeder" on the basis of document CAJ/40/2. After extensive discussion it was decided that the Office of the Union should prepare a draft position paper on the subject under discussion.
2. The Office of the Union has noted that discussion in the Committee revealed that the area of concern was not limited to the notion of breeder but embraced other elements of the protection system. Accordingly, the draft position paper set out in Annex I is entitled "The Notion of Breeder in the Plant Variety Protection System based upon the UPOV Convention."
3. It should be noted that the Technical Committee, at its thirty-sixth session to be held from April 3 to 5, 2000, will discuss a redrafted revised working document for a new General Introduction to the Assessment of Distinctness, Uniformity and Stability in New Varieties of Plants. The assessment of distinctness involves consideration whether particular plant material is material of a "variety" that is of common knowledge and must be taken into account for distinctness purposes. "Common knowledge" of particular material may be relevant to whether particular material can be said to be the subject of a discovery. The preparation of any eventual position paper should involve close coordination between the Committee and the Technical Committee. Annex II contains by way of illustration of the

on-going discussion in technical circles a draft of a supplementary document TGP/3 which will accompany the proposed new General introduction and will explain in detail the subject of common knowledge.

[Two Annexes follow]

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, F₁ 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-pollination;
- (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 *Aide-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...”

The Text of the 1991 Act

14. 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.]

15. 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

16. 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.

17. 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.

18. 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.

19. 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.*]

20. 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.

21. 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 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.

22. 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.

[Annex II follows]

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

**THE CONCEPT OF VARIETIES OF 'COMMON KNOWLEDGE',
AS DISCUSSED AT THE TECHNICAL WORKING PARTY FOR
ORNAMENTAL PLANTS AND FOREST TREES (TWO) 1999**

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I. COMMON KNOWLEDGE IS NOT DEFINED IN THE 1991 CONVENTION

The 1961 UPOV Convention, under Article 6, Conditions Required for Protection, states that 'the variety must be clearly distinguishable ... from any other variety whose existence is a matter of common knowledge at the time protection is applied for.' It then goes on to indicate how 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.*' (My italics).

The Convention as revised in 1991 says at Article 7, Distinctness, '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.' It then goes on to add the single comment that: '*In particular, the filing of an application for the granting of a breeder's right or for the entering of another variety in an official register of varieties, in any country, shall be deemed to render that other variety a matter of common knowledge from the date of the application, provided that the application leads to a granting of a breeder's right or to the entering of the said other variety in the official register of varieties, as the case may be.*' (My italics).

The records of the discussions which took place at the UPOV 1991 Diplomatic Conference make it clear that at paras 474-494 and 495-508 the intention of this sentence was to clarify a particular situation which might exist in the case of two 'competing' PBR applications in different countries (see para 505 in particular). It was not intended to be an exhaustive definition of what constitutes Common Knowledge, and the potential need for a much fuller set of examples was in fact raised (para 490).

Unfortunately, this suggestion was not followed up, and, as currently worded, the Article is being taken as a complete definition, which is giving rise to a number of misconceptions as to what constitutes a variety of Common Knowledge. Clearly although Common Knowledge is always a legal matter for the Authorities in the state or grouping of states concerned, there seems to be a need for harmonisation and clarification.

This is particularly important in Ornamentals where, in most States, there are certain very significant differences in the way varieties are marketed compared to many agricultural crops:

1. Often only a small proportion of the total varieties in trade in one species are entered for PBR.

2. Varieties are not subject to National Listing or other forms of control and therefore can go on sale without restriction as soon as the breeder is ready.

3. In States or groupings of countries which have adapted their laws to allow one year's sale before application, varieties will frequently be very well known in trade before any PBR application is made.

This means that varieties of ornamental plants are subject to much less control than agricultural crops, varieties enter the market without statutory evaluation or before such evaluation is complete, and there is much less clarity over the exact date of introduction.

II. TOWARDS A DEFINITION OF COMMON KNOWLEDGE

Two important points should be considered before trying to define 'Common Knowledge':

i) Definition of 'variety'

DUS work involves the assessment of varieties only. The 1991 UPOV Convention defines a variety as:

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 breeders' 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.

The underlined sentence is important because it confirms that varieties which do not fully meet the criteria for grant of PBR must still be considered as varieties for the purposes of DUS work provided they meet the other criteria of the definition. Therefore they also have to be considered as varieties of Common Knowledge if they also meet the criteria for the establishment of Common Knowledge - even if PBR has been refused.

The definition also covers cases such as, for example, marketed clonal material which meets all the criteria for definition of a variety even though it has never been named, and known and described variant forms of wild plants which, reproducing themselves vegetatively, are effectively clones.

Conversely, single plants do not constitute a variety, neither does the species as a whole, nor physical mixtures nor other groupings which do not fulfil the basic definition.

ii) Novelty

Novelty and Common Knowledge are two different concepts which should not be confused. Candidates for PBR have to be both DUS and sufficiently novel, i.e. the novelty of the candidate must be established with reference to the first date of sale of the candidate, and the distinctness of the candidate must be established by comparison with such other varieties which were found to be in Common Knowledge at the date of the application. The candidate itself can be in Common Knowledge at the time of the application (for example by being prominent in a public collection) but sufficiently novel for grant of PBR so long as it has not been on the market for longer than permitted by the relevant PBR legislation.

III. COMMON KNOWLEDGE: HOW IT IS ESTABLISHED

The following points summarise how varieties of Common Knowledge may be defined in practice:

i) 'Variety' criteria

- 1) To be considered a 'variety of Common Knowledge', the variety must meet the definition of a variety set out in Article 1 (vi) of the UPOV Convention.
- 2) Living plant material must be available to ensure the variety meets the above definition and for direct comparison with the candidate variety.
- 3) All those existing varieties, whether named or not, which conform to the basic UPOV definition of a variety, should be considered in the investigation of the distinctness of a new candidate, regardless of their PBR status – if they are in Common Knowledge.

ii) 'Common Knowledge' criteria

- 4) The concepts of 'novelty' (of the candidate) and 'Common Knowledge' (of the existing varieties) are not linked.
- 5) The basis on which Common Knowledge is established includes:
 - a) Marketing plants of the variety, or publishing a detailed description.

Marketing includes selling to plant propagators or young plant companies, or otherwise within the horticultural trade, or selling to retailers or the public.

It is emphasised that Common Knowledge from marketing includes the professional world, i.e. once material of a variety has been sold outside a breeding company to plant propagation companies, it is marketed and in Common Knowledge even if it is not yet available to the general public.

- b) Entry of a variety for PBR or other registration, from the date of application, if the application is successful.

A variety which is entered for PBR or other registration, where the application fails or is withdrawn, will still be in Common Knowledge if it has been marketed and fulfils the basic definition of a variety.

- c) Existence of material in plant collections e.g. Botanic gardens, provided the material is known and described and constitutes a variety according to the UPOV definition.
- 6) Common Knowledge is not limited by national or geographic borders, especially in ornamentals. Notionally it is world-wide although practically it may be limited by what can be established with reasonable effort, and also by climatic zones in the case of field grown crops. For the latter if it can be established that different geoclimatic regions will produce different types of variety, it will not be necessary to make direct comparisons between them.
- 7) Many types of information may be used as sources to contribute towards the establishment of what existing varieties are in Common Knowledge (PBR and other official registers, catalogues, books, periodicals, internet etc.), but living plant material must always be available for direct comparison with the candidate variety.
- 8) States should co-operate as much as possible in the investigation of varieties of Common Knowledge.

February 2000

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