



Disclaimer: unless otherwise agreed by the Council of UPOV, only documents that have been adopted by the Council of UPOV and that have not been superseded can represent UPOV policies or guidance.

This document has been scanned from a paper copy and may have some discrepancies from the original document.

Avertissement: sauf si le Conseil de l'UPOV en décide autrement, seuls les documents adoptés par le Conseil de l'UPOV n'ayant pas été remplacés peuvent représenter les principes ou les orientations de l'UPOV.

Ce document a été numérisé à partir d'une copie papier et peut contenir des différences avec le document original.

Allgemeiner Haftungsausschluß: Sofern nicht anders vom Rat der UPOV vereinbart, geben nur Dokumente, die vom Rat der UPOV angenommen und nicht ersetzt wurden, Grundsätze oder eine Anleitung der UPOV wieder.

Dieses Dokument wurde von einer Papierkopie gescannt und könnte Abweichungen vom Originaldokument aufweisen.

Descargo de responsabilidad: salvo que el Consejo de la UPOV decida de otro modo, solo se considerarán documentos de políticas u orientaciones de la UPOV los que hayan sido aprobados por el Consejo de la UPOV y no hayan sido reemplazados.

Este documento ha sido escaneado a partir de una copia en papel y puede que existan divergencias en relación con el documento original.



TC/34/6

ORIGINAL: English

DATE: February 9, 1998

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL COMMITTEE

Thirty-Fourth Session
Geneva, March 30 to April 1, 1998

**ASSINSEL POSITION ON CHARACTERISTICS FOR DUS TESTING AND
REMARKS OF THE ASSINSEL FODDER CROPS SECTION ON THE USE OF
ELECTROPHORETIC CHARACTERISTICS IN FORAGE DUS TESTING (RYEGRASS)**

*received from the Secretary General of ASSINSEL for presentation
to the Technical Committee*

ASSINSEL Position on Characteristics for DUS Testing
adopted by the General Assembly of Friday, May 30, 1997 in Stockholm

ASSINSEL proposes the following classification of characteristics used for DUS testing:

1. UPOV characteristics (Guidelines)
 - 1.1 Asterisk characteristics
 - 1.2 Non-asterisk characteristics

2. Additional "phenotypic" characteristics, more or less consistent with the 1991 UPOV definition of a variety (Variety means a plant grouping defined by the expression of the characteristics resulting from a given genotype). Those characteristics are mainly physiological.
 - Yield
 - Sugar content
 - Disease resistance
 - Combining ability (for autogamous parental lines)
 - Herbicide resistance

This list of additional "phenotypic" characteristics is not exhaustive and subject to changes on a crop-by-crop basis.

3. Additional non-phenotypic convincing evidence

In general, they are electrophoretic characteristics. They should be used:

- with the agreement of the applicant
- if all other characteristics failed to establish sufficient distinctness, despite some evidences
- if a test procedure has been agreed upon between the competent authority and the applicant.

If used, they can establish distinctness only in combination with other characteristics, as indicated in categories 1 and 2 ⁽¹⁾.

In fact, that definition is close to that of "last resort characteristics" proposed by UPOV, with the important difference that they cannot be used alone for establishing distinctness.

If these definitions should be accepted, ASSINSEL considers that the problem of introduction of new characteristics for DUS testing would be solved without putting new obligations on the breeders of the already protected variety. Those breeders should simply be informed by the authority that their varieties have been used in a comparison with new varieties in DUS testing using new characteristics. Only the original official reference sample of the already protected variety could be used for comparison with the "new" variety.

⁽¹⁾ This means that phenotypic characteristics may give two levels of evidence:

- the first level that can be used alone
- the second level needing additional evidence given by non phenotypic characteristics

Use of Electrophoretic Characteristics in Forage DUS Testing

(Extract of the meeting report of the ASSINSEL Fodder Crop Section held at Merelbeke, Belgium, February 26, 1997, and unanimously adopted during the ASSINSEL Congress in Stockholm in May 1997)

Mr. Le Buanec recalled that UPOV discussed the introduction of electrophoretic characteristics into its test guidelines for ryegrass during its last TWA (Working Party on Agricultural Crops) meeting and that, during this meeting, UPOV has requested breeders opinion. Since we are officially requested to give our opinion, we have to develop our position and must answer before the next meeting of the UPOV/TWA, scheduled from 10 to 14 November 1997 in Montevideo, Uruguay.

Mr. Lunde listed the following questions raised in the UPOV/TWA paper and proposed that the participants examine the questions one by one :

- **Can electrophoretic characteristics be used in cross-pollinated species ?**

It was recognized that it is easy and very rapid in cross-pollinated crops to select similar synthetic varieties with different electrophoretic characteristics. Introduction of such characteristics would erode breeders protection and make plagiarism and piracy easy. Therefore, it was unanimously agreed that, for synthetic varieties of forage crops, electrophoretic characteristics should not be used for distinctness, even in the case of similar varieties with different genetic background.

Mr. Lunde asked if electrophoretic characteristics could be accepted in parallel to traditional phenotypic analysis as last resort characteristic ? it was answered NO to that question.

Furthermore, the two following questions were raised : do we need the authorization of the breeder of the new variety to use electrophoretic characteristics ? if the breeder agrees, do we need the authorization of the breeder of the initial variety ? it was answered YES to both questions.

It was concluded that electrophoretic characteristics are very useful, but not for the study of distinctness of synthetic forage varieties.

- **Can electrophoretic characteristics be used in uniformity testing ?**

It was unanimously recognized that if a characteristic is not used for distinctness, it shall not be used for uniformity. Therefore, the use of electrophoretic characteristics for the assessment of uniformity was rejected.

- **Can a breeder of an earlier variety be forced to maintain his variety fixed in the future for these new characteristics ?**

All participants said NO, because the variety was not selected and fixed for these new electrophoretic characteristics.

- Can we use electrophoretic characteristics to assess the drift of a variety A towards a variety B ?

It was answered NO, because this is related to the problem of stability of a variety for new characteristics for which it was not selected.

- Can a difference in frequencies of alleles be used to establish distinctness ?

NO, since all participants already said no to the use of electrophoretic characteristics in distinctness testing.

- Do we accept electrophoretic characteristics as a last possibility ?

NO, as already mentioned above.

- Number of plants to be tested ?

To answer to that question, we should wait for the outputs of the study on the assessment of essential derivation on ryegrass.

- Ring test

It was recognized that ring tests were a good solution for DUS testing in general.

- Synthetic varieties, pure lines and pure lines as parents

It was accepted that electrophoretic characteristics could be used for pure lines, but not for synthetic varieties in general. In case of synthetic varieties, they could be used only if both varieties are homozygous for the alleles of a locus, what is highly improbable.

It was recognized that electrophoretic characteristics should be an additional information only. It should not be used in DUS testing for forage cross-pollinated crops. Indeed, with electrophoretic characteristics, you can easily accumulate slight differences and reach distinctness. This would make barriers for DUS lower and lower, and, as a result, breeders would have weaker protection.

It was also indicated that the use of other characters instead of electrophoretic characters could be useful to solve distinctness problem. The example of dry matter yield was given, as already accepted in the UK. Resistance to diseases could also be acceptable.