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**TECHNICAL WORKING PARTY
FOR
FRUIT CROPS**

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**CATEGORIES OF CHARACTERISTICS AND HARMONIZATION
OF STATES OF EXPRESSION**

(Proposed amendments to and considerations
concerning document TWF/28/7)

prepared by experts from South Africa

PROPOSED AMENDMENTS TO AND CONSIDERATIONS CONCERNING
DOCUMENT TWF/28/7

CATEGORIES OF CHARACTERISTICS AND HARMONIZATION OF STATES OF
EXPRESSION

Comments on document TWF/28/7 were received from the TWO (September 1997) and from Dr. Fuchs, Germany (March 17, 1998). Resulting from these comments, the following proposed amendments to the document should be considered:

1. Order of states of expression

A proposal by Dr. Fuchs has been elaborated on, for incorporation into document TWF/28/7 (his proposal No. 1.3)

The order of the states should as far as possible be:

from small to large

from light to dark (e.g. flower color)

from green to ripe (e.g. fruit color)

from low to high

from narrow to broad

from young to old

from base to apex

In certain characteristics there appears to be a clash between two recommended orders:

Ex. Shape of base: pointed (1), rounded (2), flattened (3), depressed (4)

In this case the “narrow to broad” should overrule the “low to high.”

This subject could be included in a separate chapter, as follows:

- A. Introduction
- B. Categories of characteristics
- C. Order of states of expression

2. Dr. Fuchs’ proposal No. 1.2 could be included as follows:

1. QUALITATIVE CHARACTERISTICS

Explanation

To add a last sentence:

“The states are given numbers, starting with 1, except in the case of ploidy, where the numbers of chromosome sets are used (see examples 16 and 17 under category 1.1).”

3. Dr. Fuchs' proposal No. 1.1 could be included as follows:

1.1 TRUE QUALITATIVE CHARACTERISTICS

Explanation

To change the first sentence to the following:

“These are qualitative characteristics with clear-cut (discrete) discontinuous states of expression, each state being self-explanatory and independently meaningful. Each state is clearly different from the other and as a rule these characteristics are not influenced by the environment.”

4. Some other proposals by Dr. Fuchs have already been incorporated into the document, under the following headings:

Fuchs 1.4 – under	3.1.2
1.5 -	1.2.3
2.1 -	3.1.1
2.2 -	3.1
2.3 -	3.1
2.4 -	3.1
Part of 2.5 -	3.1
Part of 3.1 -	2.1.1 (hairiness)
Part of 3.1 -	1.2.2 (color)
Part of 3.2 -	3.2 (self-explanatory wording, examples could be added)

5. Example varieties

Dr. Fuchs' proposal No. 2.5 further mentions that “Example varieties are not supposed to change their order under different environmental conditions.”

This could be incorporated into the Revised TG/1/2, under the heading VI Characteristics and Symbols, or alternatively, into the explanatory document (presently all information contained in TWF/28/7 and TWF/28/9), which could be expanded to give explanations on all ten Roman headings found in the Test Guidelines. (It was decided that the revised TG/1/2 should not be too voluminous.)

6. The matter of distinctness with regard to the states of expression

Dr. Fuchs mentioned the following:

Proposal 2.6

In the case of “quantitative characteristics”: “The individual states should be meaningful. As a rule a difference of 2 notes may be expected to be a clear difference.”

Proposal 3.4

In the case of “characteristics other than clearly qualitative or quantitative”: “The states are formed in such a way that as far as possible with a difference of two notes a clear difference can be presumed (except qualitative elements of the scale) and that the extreme states in the scale represent at least a clear difference in the sense of Art. 1 of the Convention.”

This matter relates to the following question raised in the earlier document TC/33/8 (page 20), and which still needs clarification:

THE QUESTION WHETHER DISTINCTNESS IS RELATED TO THE STATES OF EXPRESSION

Some countries recognize distinctness between every second state in quantitative characteristics and between every state in qualitative characteristics. If this is UPOV policy, there could be a difference between the levels of distinctness if a characteristic was changed from quantitative to qualitative.

<u>Example</u>	<u>Quantitative</u>	<u>Qualitative</u>
erect	1	1
erect to semi-erect	2	2
semi-erect	3	3
semi-erect to horizontal	4	4
horizontal	5	5
etc.	In this case only 1,3, and 5 are regarded as distinct.	In this case 1,2,3,4 and 5 are all regarded as distinct.

This problem was raised in the TWF (1996).

7. TWV proposal for characteristics on attitude

The TWV has proposed a standardized format for characteristics on attitude in relation to soil level (document TWV/29/7 of 31-05-1995). The pros and cons of this proposal have been discussed under category 3.2.1 of document TWF/28/7 (see page 30 particularly).

Dr. Fuchs proposes a less stringent approach (his proposal No. 3.3):

“One and the same characteristic may have different numbers of meaningful states in different species, e.g.:

Attitude: erect (1), semi-erect (2), horizontal (3)

or: erect (1), erect to semi-erect (2), semi-erect (3), semi-erect to horizontal (4), horizontal (5)”

This matter still needs to be resolved.

8. True quantitative characteristics with only the “medium” state fixed

The TWO made a proposal, during their session of 1997, to change the wording of characteristics under category 3.1.3 of document TWF/28/7, namely the true quantitative characteristics with only the “medium” state fixed.

This category would have to be rewritten completely but the essentials of the amendments would be the following:

Present TWF/28/7

Size relative to: much smaller (1), slightly smaller (3), same size (5), slightly larger (7), much larger (9)

TWO objection:

(a) There is too much distance between “much” in state 1 (or 9) and “slightly” in state 3 (or 7). This wording does not allow for a moderate difference in size, spaced exactly in between state 1 and 5 (or 5 and 9).

(b) The full nine states would have to read:

Size relative to: much smaller (1), much smaller to slightly smaller (2), slightly smaller (3), slightly smaller to same size (4), same size (5), etc.

The word “to” makes it rather clumsy, especially in cases with more complicated wording.

Amended TWF/28/7 (TWO proposal)

Size relative to: very much smaller (1), much smaller (2), moderately smaller(3), slightly smaller (4), same size (5), slightly larger (6), moderately larger (7), much larger (8), very much larger (9)

The version is much simpler and solves the problems mentioned on pages 24 and 25 (under category 3.1.3) of the present document TWF/28/7.

All are thanked for their proposals. More comments will be welcomed.

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