

**TWV/33/8****ORIGINAL:** English**DATE:** June 4, 1999

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR VEGETABLES

Thirty-Third Session
Hanover, Germany, July 5 to 9, 1999

**PROPOSED REVISIONS TO THE WORKING PAPER ON TEST GUIDELINES
FOR SWEDE FOLLOWING COMMENTS FROM THE SUBGROUP EXPERTS**

Document prepared by experts from the United Kingdom

Revision to Swede Guideline following comments from the expert subgroup on discussion document TWV/32/5 (revised).

Chapter IV par.2

How about measured characteristics referred to in par.1? The basis for uniformity testing would usually be 60 measurements.

The paragraph has been removed as it is probably not necessary.

The original text was meant to convey the idea that where a plot is scored, all plants would be considered rather than a sample of plants; uniformity assessment would be carried out on all the plants. Where a sample of plants are measured, then the assessment of uniformity is made on the sample.

Chapter VI Table of characteristics

Char Comments and response for discussion

3 *Would prefer to call this characteristic “Leaf: lobing” with states absent/present, and we trust that testers will not create intermediate states like “absent to present”.*

The reason for changing the definition of this characteristic is that the two leaf types can sometimes (depending on sowing date and growing conditions) be difficult to separate. Separation is not just dependent on the presence of lobes, but also on the development of a lamina ribbon which effectively shortens the petiole, and the suppression of ‘scale’ leaves. Leaf type is therefore a syndrome of characteristics.

6 and 8 *The widest part of a lobed leaf is usually the terminal lobe. So, char. 8 should be sufficient.*

UK data indicates that the widest part of the leaf is usually below the terminal lobe. Both characteristics can be useful if measured, as they are not always highly correlated.

7 *The word “length” is missing*

The word ‘length’ has been added

9 *The definition of the measuring point “widest point” might be complicated, moreover there are no example varieties. So, the char. should be deleted.*

The example varieties were not fully revised in the document sent to experts. Example varieties are Laurentian (3), Magres, Ruby (5), Balmoral (7). Balmoral is no longer registered but is used as a reference point as registered varieties only have a range from 3 to 6. If measured this characteristic is useful for discrimination.

11 *There is a (+)so an explanation should be given on page 12*

The (+) has been removed as it is not necessary to explain. Could this be Leaf:
dentation of margin?

15 *Restricted to lobed varieties?*

There is no reason to limit this characteristic to lobed varieties

16 to 18 *Appears to be too complicated*

Suggest to have only characteristic 16 with extended states “green, light bronze, dark bronze, light reddish purple, dark reddish purple. Alternatively to keep char. 16 and have char.17.1 “Root: anthocyanin coloration of skin above soil in bronze varieties” and char.17.2 “Root: anthocyaninin reddish purple varieties”

See comments on ‘expression of skin colour’

20 *The terms for the different states of expression do not really fit the drawings. Suggest to use the terms similar to those in Fodder Beet (TG/150/3) i.e. transverse elliptic, spheroidal, cylindro-conical, ovoid, cylindrical.*

Although transverse elliptic, spheroidal (circular) and cylindrical (narrow elliptic) correspond with the drawings, cylindro-conical and ovoid are not compatible descriptors for broad elliptic and obovate.

Broad elliptic describes a box or square root with roughly similar height and width. Obovate is much flatter near the crown and more tapered at the base of the root and is therefore not ovoid.

21 *Is this absolute length or relative to width?*

Length is absolute and is usually measured

22 *Does this char. give additional information to char.20?*

Root diameter, if measured, will be more discriminating than the root shape score (20) which is used to describe general types.

24 *Are the two states clearly separate from each other? If not, there should be three states to make the char. workable.*

See comments on ‘expression of skin colour’

25 and 26 *It would be better to keep only char.25 with the states “white, light yellow, dark yellow”.*

To avoid mixing a discontinuous grouping characteristic (25) with continuous expression of intensity (26) these characteristics have been separated.

28 to 36 *Char. of the generative stage*

The question why no generative char. were included was raised in TWA/26/11. However, this question was not seriously discussed. Suggest the deletion of all of them.

The generative characteristics are not useful for discrimination in this crop and have now been excluded from the guideline.

Chapter VIII Ad. 27

In the third line, four replications are mentioned. Chapter III par. 3 provides only two replications as a minimum.

I have deleted the reference to the number of plants sampled and the number of replications. This removes the inconsistency.

Skin Colour

The expression of skin colour is complex and varies with environment.

16 On quick examination root skin colour may appear to be simple with three different types: Green, Bronze (green partially overlaid with purple) and Purple.

This characteristic is quick to record, but may not always be reliable. Information provided in a Technical Questionnaire would usually reflect such an assesment.

In some growing conditions, Bronze varieties can be very difficult to classify reliably. For example Melfort, which appears Green, and Angus and Kenmore, which appear Purple, are all Bronze types.

24 This characteristic reliably separates Purple skinned (anthocyanin is entire) varieties from both Green (anthocyanin is absent) and Bronze skinned varieties (anthocyanin is partial or absent but mostly appearing mottled).

There are only two states as this characteristic cannot be used to separate Green from Bronze as the expression of partial anthocyanin may be so weak that it is difficult to determine.

17 This characteristic separates Green skinned from Bronze skinned varieties. Any expression of anthocyanin (no matter how slight) on the root skin will indicate a Bronze rather than Green, but roots have to be examined very carefully.

Characteristics 24 and 17 will reliably determine the correct skin colour grouping.

18 This split characteristic describes the intensity of anthocyanin for both Bronze and Purple varieties. The range of expression and the nature of the expression is very different in the two types, so 18.1 and 18.2 cannot be put together in one scale.

[End of document]