

## Technical Working Party for Fruit Crops

TWF/54/9

Fifty-Fourth Session  
Nîmes, France, July 3 to 7, 2023

Original: English  
Date: June 8, 2023

---

**MATTERS TO BE RESOLVED CONCERNING TEST GUIDELINES PUT FORWARD FOR ADOPTION BY THE TECHNICAL COMMITTEE: APPLE (FRUIT VARIETIES)**

*Document prepared by the Office of the Union*

*Disclaimer: this document does not represent UPOV policies or guidance*

1. The Enlarged Editorial Committee (TC-EDC), at its October 2022 meeting<sup>1</sup> considered document TG/14/10(PROJ.6). The TC-EDC agreed that the issues raised on the draft Test Guidelines for Apple should be addressed by the Leading Expert, Mr. Erik Schulte (Germany). The list of issues raised by the TC-EDC and information provided by the Leading Expert are provided in the Annex to this document.
2. The Leading Expert requested that the draft Test Guidelines for Apple be withdrawn from the agenda of the TC-EDC/Mar23 meeting and that a new draft be considered by the TWF at its fifty-fourth session<sup>2</sup>.
3. Along with the new draft of the Test Guidelines for Apple for consideration by the TWF (see document TG/14/10(PROJ.7), the Leading Expert provided the following information on growing cycles of Apple.

"It has become obvious that inconsistencies between the paragraphs 3.1.4, 8.1 (a), 8.1 (b), and Ad. 1 of the document need further consideration. According to paragraph 3.1.4 the growing cycle is considered from BBCH 01 (sprouting) to BBCH 00 (dormancy). However, characteristics 1 to 5 (00) are observed before bud burst (which is BBCH 01 to BBCH 07), and the last observations within a growing cycle are those on fruit characteristics (BBCH 99). Consequently, the growing cycle should be defined as from BBCH 00 to BBCH 99. Paragraphs 8.1 (a), 8.1 (b) and Ad. 1 would need being amended accordingly.

"Therefore, a modification of the wording under paragraph 3.1.4 should be considered by the TWF at its 54<sup>th</sup> meeting in 2023.

3.1.4 (document TG/14/10(PROJ.6))

The growing cycle is considered to be the duration of a single growing season, beginning with bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period ends with the swelling of new season buds.

3.1.4 (document TG/14/10(PROJ.7))

The growing cycle is considered to be the duration of a single growing season, beginning with the dormancy period, followed by bud burst (flowering and/or vegetative), flowering and fruit harvest and concluding when the following dormant period starts.

"It is proposed to amend the wording in the draft TG Apple, and, at a later stage, to reconsider the wording in the explanation of "growing cycle" (UPOV-TGP/7, ASW 3 [Chapter 3.1.2])."

[Annex follows]

---

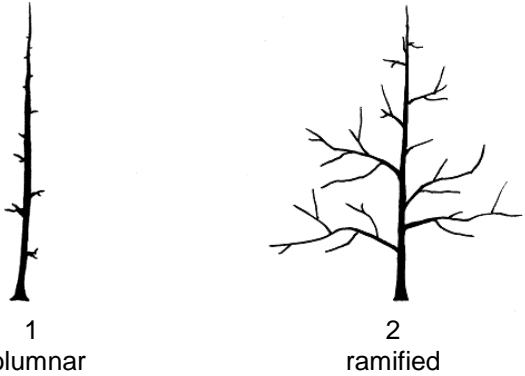
<sup>1</sup> held in Geneva, on October 18, 19 and 24, 2022

<sup>2</sup> to be held in Nîmes, France, from July 3 to 7, 2023


## ANNEX

Recommendations from the TC-EDC on the draft Test Guidelines for Apple

1. Recommendations from the TC-EDC on the draft Test Guidelines for Apple are presented in the table below, including the required editorial clarification (indicated with “#”) and the response from the Leading Expert, Mr. Erik Schulte (Germany):

General	to add space before the %
#4.1.4	to check whether to add number of parts of plants per plant (ASW 7b) <i>Leading Expert: agreed; propose to take wording from the previous guidelines version TG/14/9, as far as possible: (varieties resulting from crossing:) ... in the case of parts of the tree, the number to be taken from each of the trees should be 2; (varieties resulting from mutation:) in the case of parts of the tree, the number to be taken from each of the trees should be 1.</i>
#Table of char.	- to ensure that explanations are compatible with the BBCH scale (see individual comments on characteristics and explanations) - to indicate growth stages from ... to (e.g. 75 - 77, not 75/77) <i>Leading Expert: agreed; and characteristic 19 to indicate (BBCH) 65 - 69</i>
Char. 1	to remove (a) (conflicts with Ad. 1)
#Char. 2	to add illustration (see TGP/14, page 50) <i>Leading Expert: agreed and provided illustration below</i>  1 columnar                      2 ramified
#Chars. 6 to 16	to check growth stages (75/77 seems rather late, while in stage 19 the first leaves are already fully expanded) <i>Leading Expert: observations should be made on fully mature leaves (see also 8.1 (c)), i.e. in mid-summer. As there is no appropriate reference in BBCH to the apple leaf at its peak maturity, but only to the immature leaf (BBCH 19), the reference can either be expressed, as already done, by BBCH 75-77 (stages refer to fruit development) or by BBCH 39 (refers to shoot development). If a reference to fruit development would be considered inappropriate by the TC-EDC, the reference to the shoot development (BBCH 39) is preferred.</i>
Char. 13	to add hyphen to “cross-section”
Char. 19	- to check growth stage (67-69 not in line with (d)) - to read “Flower: anthocyanin coloration at base of filament”
Char. 20	to be moved after characteristic 17
Char. 21	to delete “(stage 65)” and stage 73
Char. 22	to invert order of states 6 and 7
Char. 26	- to replace “conical” with “conic” - to replace “obconical” with “obconic”
#Char. 35	to add explanation of “russet” (dull brown rough finish on the skin of some apples) or illustrations <i>Leading Expert: agreed and proposed to add explanation to read “The russet should be considered as a dull brown rough finish on the skin of some apple fruit.”</i>
#Char. 36	to add explanation or illustration of “cheeks” <i>Leading Expert: agreed and proposed to add explanation to read “See Ad. 35.” and to do the same for characteristic 37</i>

#Chars. 35 to 43	to check whether to use drawing of Ad. 40 to explain the parts of the apple mentioned in these characteristics and add to 8.1 (g) <i>Leading Expert: did not agree. The illustration of Ad 40 shows a fruit in cross section, whereas characteristics 35 -37 (russet), and 38 (lenticels), refer to the fruit skin which is not displayed in the illustration in Ad. 40. However, if the TC-EDC does not consider expressions as “stalk attachment”, “cheeks”, or “eye basin” sufficiently self-explanatory, and sees a need for clarification, then references to the illustration of Ad. 40 could be considered in the following way: (addition to Ad. 35) “The stalk attachment is considered the proximal part of the fruit (see also Ad. 40, line h-g).”; (addition to Ad 36) “The cheeks are considered the outer parts of the fruit skin, which is the area between the stalk attachment and the eye basin (see also Ad. 40, outlines of the fruit between lines a-b and e-f).”; (addition to Ad. 37) “The eye basin is considered the distal part of the fruit, where the calyx (remaining of the former sepals) is located (see also Ad. 40, line c-d).” Characteristics 38 and 39 have already got their respective illustrations under Ad. 38 and Ad. 39 – cannot see that a reference to Ad. 40 would improve.</i>
Chars. 45, 46, 47	to add definitions for main and secondary colors (see standard definition TGP/14)
Char. 47	to delete “Only varieties with...”
#Chars. 47, 48	to add (g) <i>Leading Expert: agreed</i>
8.1 (a)	to read “Observations should be made on bare trees in winter, after at least one satisfactory crop of fruit.”
8.1 (a) and (b)	Chars. 1 to 5 are observed at the end of the growing season, which corresponds to the definition of a growing cycle (see 3.1.4). The season starts with growth stage 01 and ends with growth stage 00. Consequently, (a) can be deleted and (b) should read „Observations should be made on lateral shoots.” As (b) applies only to char. 4 and 5, it could be moved to 8.2.
8.1 (c)	to check whether to add time of observation (growth stage 75/77?) <i>Leading Expert: agreed and proposed to add growth state 39</i>
8.1 (e)	to be deleted (applies only to 21. and covered by growth stage 73-74)
8.1 (g)	to read “Observations should be made on fruits when they are ripe for eating.”
Ad. 1	Clarification on the time of observation is necessary. The first sentence refers to observation at stage 00, e.g. <u>at the end</u> of the growing cycle. <i>Leading Expert: yes</i> The second sentence describes observation in the second growing cycle only ( <u>after</u> at least one satisfactory crop of fruits), e.g. an additional establishing year for this characteristic <i>Leading Expert: sorry, in my version the explanation “after at least one satisfactory crop of fruits” is part also of the first sentence. In an optimum case the first “satisfactory” crop of fruits does occur already in the final year of the establishment period; consequently the year after would then be the first year of full characteristic assessment (or the first out of two growing cycles). An additional establishment year is not necessary then; it would only be required in the unusual case that in the course of establishment period so far not any flowers or fruits did occur. The observation should preferably be done in the course of or at the end of the particular observation period (growing cycle), not during its subsequent one.</i>
Ad. 1	The tree vigor (Char. 1) has a growth stage of 00. However, the explanation suggests to assess vigor when dormant or at peak of vegetative growth in summer. Should the growth stage be removed in Char 1 or another added? If the assessment is typically made when dormant, I would change the order to explain this first in Ad. 1. <i>Leading Expert: agreed; propose to remove the growth stage in char. 1, and add to the explanation in Ad. 1, in the second sentence, after “... in summer”: stage 39, and after “... dormant season before pruning”: stage 00.</i>
Ad. 1	to read “... considering shoot length and thickness, and trunk diameter”
Ad. 1	1 to read “one”
Ad. 4	to read “Observations should be in the middle third of the shoot.”
Ad. 5	to read “Observations should be made in the middle third of the shoot, by counting in a defined area or by visual assessment of the density of lenticels on the bark.
Ad. 17	to add “a” before “horizontal”
Ad. 19	to enlarge arrow head
Ad. 25	to be deleted

Ad. 30	to add “the” before “bloom”
Ad. 31	to be deleted
#Ad. 33	to check whether to provide better photos for state 4 or whether to replace photos with drawings <i>Leading Expert: provided illustration below</i> 
Ad. 38	to read “[e.g. a <del>window</del> an area of 1 cm <sup>2</sup> ]”
Ad. 40	to read “...; in case of depth of eye basin: a-c instead of b-d).”
Ad. 44	- to check whether to be deleted (not necessary, see 8.1 (g)) <i>Leading Expert: agreed to delete; if TC-EDC considers the second sentence useful, then propose to delete the first sentence only, and to amend the wording of the second sentence, as follows.</i> - if kept, add “the” before “time”; in the next sentence replace “it” with “this”
Ad. 50	to read “The time for harvest is reached when fruits are ripe for picking and...”
Ad. 51	to read “The time of eating maturity is reached when the fruit is ripe for eating and has reached its optimum flavor and aroma...”
8.3	- to add literature reference in heading and to move source to 9. - to check whether table with synonyms at the bottom of 8.3 to become 8.4 named “Other Names of the Example Varieties” <i>Leading Expert: agreed</i>
TQ 5	to delete the extra space before “please mark”
TQ 7.3	to read “In the case of mutant varieties...”

[End of Annex and of document]