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**TECHNICAL WORKING PARTY
FOR
FRUIT CROPS**

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**COMMENTS ON THE DRAFT TEST GUIDELINES FOR APPLE ROOTSTOCKS
(TG/163/1(proj.))**

Document prepared by experts from the United Kingdom

COMMENTS ON THE DRAFT GUIDELINES FOR APPLE ROOTSTOCKS (*Malus* Mill.)
(TG/163/1(proj.)) from the United Kingdom

Page 4, V Grouping of Varieties

It is recommended that the competent authorities use the following characteristic for grouping varieties:

Characteristic 31 Time of beginning of bud burst

Change of state: Characteristic 3

Change to: Plant: growth of shoot	straight	M9	1
	wavy/zig-zag	M2, M25	2

From three states, straight, wavy and zig-zag, to two states: straight and wavy/zig-zag. This change is endorsed by experts in France, Germany, New Zealand and South Africa. In our opinion there is insufficient distinction between wavy and zig-zag.

Change of wording: Characteristic 19

It is suggested that the wording changes from Leaf: general pose to Leaf: attitude in relation to shoot as in the apple guidelines TG/14/8.

Additions to example varieties

It is suggested that the following newer varieties of apple rootstock are added as example varieties. Where M9 is used as an example variety, this is virus free M9. The suggested examples/changes have been agreed by France, Germany and the United Kingdom. Other suggestions where there was a disagreement in states or the suggested examples could not be checked are omitted.

characteristic 1: Plant: vigor			
	weak	add	J-TE-F
	medium	add	M9
characteristic 2: Plant: number of basal shoots			
	few	add	M9
	medium	add	J-TE-E
	many	add	M7
characteristic 4: Shoot: pubescence			
	weak	add	B9
	strong	add	M4

characteristic 5: Shoot:	glossiness of bark			
	absent/ very weak	delete	M9	
	medium	delete	M25	substitute M9
characteristic 6: Shoot:	thickness			
	thin	add	J-TE-F	
characteristic 7: Shoot:	length of internodes			
	short	delete	M27	substitute J-TE-H
characteristic 8: Shoot:	number of lenticels			
	few	add	J-TE-F	
characteristic 9: Shoot:	size of lenticels			
	small	delete	M26	
	medium	add	M26	
characteristic 10: Shoot:	shape of lenticels			
	broad elliptic	add	M26	
	circular	add	M27	
characteristic 11: Shoot:	color of sunny side			
	greenish brown	add	M4	
	reddish brown	delete	MM111	substitute M9, J-TE-G
	dark brown	add	MM106, B9	
characteristic 12: Shoot:	size of bud			
	large	add	M2	
characteristic 13: Shoot:	shape of tip of bud			
	rounded	add	J-TE-E	
characteristic 16: Shoot:	color of growing tip			
	blackish	add	B9	
characteristic 18: Expanding leaf:	hue of anthocyanin			
	purple	delete	M27	substitute B9
characteristic 20: Leaf blade:	length			
	short	add	M27	
	medium	add	J-TE-F	

characteristic 21: Leaf blade: width

broad	delete	P16	substitute P14
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characteristic 22: Leaf blade: ratio length/width

small		M7, J-TE-E
medium		M26
large		P16

characteristic 27: Leaf blade: anthocyanin coloration of veins

strong	add	B9
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characteristic 28: Petiole: length

long	add	J-TE-E
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characteristic 29: Leaf: ratio length of blade/length of petiole

small		J-TE-E
medium		M9, B9
large		P2, P16

characteristic 30: Stipule: size

small	add	J-TE-E
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Technical questionnaire - page 2 - characteristics

If additional example varieties are accepted, the examples for the characteristics quoted will be amended.

IX Literature

The suggested list of references follows:

IX. Literature/Littérature/Literatur

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Maurer, Erich., 1939: "Die Unterlagen der Obstgehölze", Berlin: Parey Verlag, DE

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Tydeman, H.M., 1953: "A description of classification of the Malling-Herton and Malling XXV Apple rootstocks," Report East Malling Research Station for 1952, GB, pp. 53-63

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