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## INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

## TECHNICAL COMMITTEE

## Twelfth Session

Geneva, November 13 to 15, 1978

## TEST GUIDELINES

(Item 6 of the Draft Agenda)

Document prepared by the Office of the UnionI. Test Guidelines for Adoption

1. During their 1978 sessions, the various Technical Working Parties have discussed several draft Test Guidelines and the comments received on those draft Test Guidelines from the professional organizations. Having finalized the discussions on several of them, the Technical Working Parties have asked the Technical Committee to adopt finally the draft Test Guidelines for the following species and to agree on their publication as final Test Guidelines:

TG/56/2(proj.) - Almond  
 TG/58/2(proj.) - Rye  
 TG/59/2(proj.) - Lily  
 TG/60/2(proj.) - Beetroot  
 TG/61/2(proj.) - Cucumber and Gherkin  
 TG/62/2(proj.) - Rhubarb.

2. The above-mentioned draft Test Guidelines will be edited by the Editorial Committee as far as possible in the evenings of November 13 and 14, 1978.

3. The Technical Committee is invited to adopt the Test Guidelines mentioned in paragraph (1) subject to the changes recommended by the Editorial Committee.

II. Information on Other Test Guidelines

4. In addition to the draft Test Guidelines which have been finalized by the Technical Working Parties, first drafts of Test Guidelines for the following 14 species have been established by the different Technical Working Parties, for presentation to the international professional organizations for comment:

TG/2/2(proj.) - Maize  
 TG/4/2(proj.) - Ryegrass  
 TG/26/2(proj.) - Chrysanthemum (Perennial)  
 TG/28/3(proj.) - Pelargonium  
 TG/63/1(proj.) - Black Radish  
 TG/64/1(proj.) - Radish  
 TG/65/1(proj.) - Kohlrabi  
 TG/66/1(proj.) - Lupin

TG/67/1(proj.) - Sheep's Fescue and Red Fescue  
TG/68/1(proj.) - Berberis  
TG/69/1(proj.) - Forsythia  
TG/70/1(proj.) - Apricot  
TG/71/1(proj.) - Hazelnut  
TG/72/1(proj.) - Willow

5. Of the last-mentioned draft Test Guidelines, so far the draft Test Guidelines for Maize, for Berberis, for Forsythia and for Willow have not been completed and sent to the professional organizations for comment. It is hoped that this can yet be done before the end of the current year.

6. Two summary tables, indicating the different stages of completion of Test Guidelines, are reproduced in the Annex to this document.

### III. General Remarks on Test Guidelines

7. During its seventh session (May 1978) the Technical Working Party for Agricultural Crops agreed to ask the Technical Committee to render a general decision on the question whether the material to be submitted by the breeder for testing purposes has to stem from the growing period preceding the testing or whether it could stem also from other growing periods (see document TW/28, paragraph 11).

8. The Technical Working Party for Agricultural Crops also decided during the above-mentioned session to ask the Technical Committee whether the Technical Notes of Test Guidelines must always indicate grouping characteristics, or whether a general phrase referring to the suitability of grouping characteristics would be sufficient (see document TW/28, paragraph 11).

9. The Cereals Subgroup of the Technical Working Party for Agricultural Crops has agreed on several methods and prepared illustrations for cereals which have been approved by the Technical Working Party for Agricultural Crops. As the respective Test Guidelines will not be revised or reprinted in the near future the Technical Working Party has requested the publication of the methods and illustrations in the UPOV Newsletter. For the information of the Technical Committee the methods are reproduced in the Annexes II (Method for the Determination of the Anthocyanin Coloration of Coleoptiles of Wheat), III (Method for the Determination of the Phenol Reaction of Wheat) and IV (Method for the Determination of the DDT Reaction of Barley).

#### 10. The Technical Committee is invited:

(i) to adopt the draft Test Guidelines mentioned in paragraph (1) of this document subject to editing by the Editorial Committee,

(ii) to take note of the status of the draft Test Guidelines mentioned in paragraphs (4) to (6),

(iii) to render a decision on the questions presented to it by the Technical Working Party for Agricultural Crops (paragraphs (7) and (8),

(iv) to take note of the intention to publish methods and illustrations for cereals (Annexes II to IV).

[Four Annexes follow]

## TC/XII/3

## ANNEX I

Document Number of the Test Guidelines or Draft Test Guidelines  
(the latter with the indication "(proj.)" after the Document Number)  
Prepared or to be Prepared by the Office of the Union (as of September 25, 1978)

<u>Number</u>	
* TG/1/1	General Introduction/Introduction Générale/Allgemeine Einführung
* TG/2/1	Maize/Mais/Mais
- TG/2/2 (proj.)	Maize/Mais/Mais (revised draft)
* TG/3/1	Wheat/Blé/Weizen
* TG/3/5	Wheat/Blé/Weizen (Triticum aestivum)
* TG/4/1	Ryegrass/Ray-grass/Weidelgras
- TG/4/2 (proj.)	Ryegrass/Ray-grass/Weidelgras (revised draft)
* TG/5/1	Red Clover/Trèfle violet/Rotklee
* TG/6/1	Lucerne/Luzerne
* TG/7/1	Garden Pea/Pois Potager/Gemüseerbsen
* TG/8/1	Broad Bean/Fève/Puffbohne
* TG/9/1	Runner Bean/Haricot d'Espagne/Prunkbohne
* TG/V/2	Euphorbia fulgens/Euphorbia/Korallenranke
* TG/11/1	Rose/Rosier/Rose
* TG/12/1	French Bean/Haricot/Bohne
* TG/13/1	Lettuce/Laitue/Salat
* TG/14/1	Apple/Pommier/Apfel
* TG/15/1	Pear/Poirier/Birne (+ TG/15/1 Corr.)
* TG/16/1	Rice/Riz/Reis
* TG/17/1	African Violet/Saintpaulia/Usambaraveilchen
* TG/18/1	Elatior Begonia/Begonia elatior/Elatior Begonie
* TG/19/4	Barley/Orge/Gerste (+ TG/19/4 Corr.)
* TG/20/4	Oats/Avoine/Hafer
* TG/21/4	Poplar/Peuplier/Pappel
* TG/22/3	Strawberry/Fraisier/Erdbeere
* TG/23/2	Potato/Pomme de terre/Kartoffel
* TG/24/2	Poinsettia/Poinsettie
* TG/25/3	Carnation/Oeillet/Nelke
- TG/26/2 (proj.)	Chrysanthemum (Perennial)/Chrysanthème vivace/Chrysantheme (mehrjährig)
* TG/27/3	Freesia/Freesie
- TG/28/3 (proj.)	Pelargonium/Pelargonie
* TG/29/3	Alstroemeria/Alstroemère/Inkalilie
* TG/30/3	Bent/Agrostide/Straussgras
* TG/31/3	Cocksfoot/Dactyle/Knaulgras
* TG/32/3	Common Vetch/Vesce commune/Saatwicke
* TG/33/3	Kentucky Bluegrass/Pâturin des prés/Wiesenrispe
* TG/34/3	Timothy/Fléole des prés, Fléole diploïde/Wiesen-, Zwiebellieschgras
* TG/35/3	Cherry/Cerisier/Kirsche
* TG/36/3	Rape/Colza/Raps (+ TG/36/3 Corr.)
* TG/37/3	Turnip/Navet/Herbst-, Mairübe
* TG/38/3	White Clover/Trèfle blanc/Weissklee
* TG/39/3	Meadow-, Tall Fescue/Fétuque des prés, Fétuque élevée/Wiesen-, Rohrschwengel
* TG/40/3	Black Currant/Cassis/Schwarze Johannisbeere
* TG/41/4	European Plum/Prunier européen/Pflaume
* TG/42/3	Rhododendron
* TG/43/3	Raspberry/Framboisier/Himbeere
* TG/44/3	Tomato/Tomate
* TG/45/3	Cauliflower/Chou-fleur/Blumenkohl
* TG/46/3	Onion/Oignon/Zwiebel
* TG/47/2	Streptocarpus/Drehfrucht
* TG/48/3	Cabbage/Chou pommé/Kopfkohl (+ TG/48/2 Corr.)
* TG/49/3	Carrot/Carotte/Möhre
* TG/50/3	Vine/Vigne/Rebe
* TG/51/3	Gooseberry/Groseillier à maquereau/Stachelbeere
* TG/52/2	Red and White Currant/Groseillier à grappes/Rote und Weisse Johannisbeere
* TG/53/3	Peach/Pêcher/Pfirsich
* TG/54/3	Brussels Sprouts/Chou de Bruxelles/Rosenkohl
* TG/55/3	Spinach/Epinard/Spinat
+ TG/56/2 (proj.)	Almond/Amandier/Mandel
- TG/57/1 (proj.)	Flax, Linseed/Lin/Lein
+ TG/58/2 (proj.)	Rye/Seigle/Roggen
+ TG/59/2 (proj.)	Lily/Lis/Lilie
+ TG/60/2 (proj.)	Beetroot/Betterave rouge/Rote Rübe
+ TG/61/2 (proj.)	Cucumber, Gherkin/Concombre, Cornichon/Gurken
+ TG/62/2 (proj.)	Rhubarb/Rhubarbe/Rhabarber
- TG/63/1 (proj.)	Black Radish/Radis noir/Rettich
- TG/64/1 (proj.)	Radish/Radis/Radieschen
- TG/65/1 (proj.)	Kohlrabi/Chou-rave/Kohlrabi
- TG/66/1 (proj.)	Lupins/Lupinen
- TG/67/1 (proj.)	Sheep's Fescue + Red Fescue/Fétuque ovine + Fétuque rouge/Schafschwengel + Rotschwengel
- TG/68/1 (proj.)	Berberis/Berberitze
- TG/69/1 (proj.)	Forsythia/Forsythie
- TG/70/1 (proj.)	Apricot/Abricotier/Aprikose
- TG/71/1 (proj.)	Hazelnut/Noisetier/Haselnuss
- TG/72/1 (proj.)	Willow/Saule/Weide

\* Adopted

+ Technical Committee  
to adopt- Professional Orga-  
nizations to comment

## Stages of Test Guidelines (as of September 25, 1978)

Technical Working Party Stage	Agricultural Crops	Forest Trees	Fruit Crops	Ornamental Plants	Vegetables
adopted (total 53)	Barley Bent Cocksfoot Common Vetch Kentucky Bluegrass Lucerne Maize Meadow Fescue, Tall Fescue Oats Potato Rape Red Clover Rice Ryegrass Timothy Turnip White Clover Wheat (Triticum aestivum) Wheat	Poplar	Apple Black Currant Cherry European Plum Gooseberry Peach Pear Raspberry Red and White Currant Strawberry Vine	African Violet Alstroemeria Carnation Elatior Begonia Euphorbia fulgens Freesia Poinsettia Rhododendron Rose Streptocarpus	Broad Bean Brussels Sprouts Cabbage Carrot Cauliflower French Bean Garden Pea Lettuce Onion Runner Bean Spinach Tomato
Technical Committee to adopt (total 6)	Rye		Almond	Lily	Beetroot Cucumber, Gherkin Rhubarb
Professional Organizations to comment (total 14)	Lupin Maize (revised) Ryegrass (revised) Sheep's Fescue and Red Fescue	Willow	Apricot Hazelnut	Chrysanthemum Pelargonium Berberis Forsythia	Black Radish Radish Kohlrabi
in preparation (total 9)	Flax, Linseed	Picea abies	Blackberry Citrus	Narcissus Thuja Roses (revised)	Cornsalad Garden Peas (revised)
planned	Oil Radish Poppy (Sugar Beet) Tobacco	Abies Douglas fir Larix conifers Pinus nigra Poplar (revision)	Chestnut Japanese Plum Plum Root-stocks	Anthurium Chamaecyparis Cypress Dahlia Fuchsia Gladiolus Iris Juniper Tulip Gerbera Kalanchoe Carnation (revision) Poinsettia (revision)	Celeriac Celery Dill Parsley Capsicum Leak, Lettuce (revision)

## ANNEX II

METHOD FOR THE DETERMINATION OF THE ANTHOCYANIN COLORATION  
OF COLEOPTILES OF WHEAT

METHODE DE DETERMINATION DE LA PIGMENTATION ANTHOCYANIQUE  
DU COLEOPTILE CHEZ LE BLE

METHODE ZUR BESTIMMUNG DER ANTHOCYANFÄRBUNG DER KEIMSCHIEDEN  
BEI WEIZEN

Number of grains per test:	20 grains for distinctness, 100 grains for homogeneity
Nombre de semences par essai :	20 pour la possibilité de distinction, 100 pour
Anzahl Körner pro Prüfung:	l'homogénéité
	20 Körner für die Unterscheidbarkeitsprüfung,
	100 Körner für die Homogenitätsprüfung
Equipment:	Petri dishes, filter paper
Equipement :	Boîtes de Pétri, papier filtre
Geräte:	Petri-Schalen, Filterpapier
Place:	Laboratory or greenhouse
Lieu :	Laboratoire ou serre
Ort:	Labor oder Gewächshaus
Light:	After the coleoptiles have reached a length of
Lumière :	about 1 cm, artificial light (12000-15000 lux)
Licht:	is provided continuously for 3-4 days
	Ininterrompue pendant 3 à 4 jours (12000 à
	15000 lux) après que les coléoptiles ont atteint
	environ 1 cm de longueur
	Nachdem die Keimscheiden 1 cm Länge erreicht
	haben, wird für 3 bis 4 Tage ununterbrochen
	künstliches Licht (12000 bis 15000 lux) gegeben
Temperature:	
Température :	15 - 25°C
Temperature:	
Time of recording:	Coleoptiles fully developed (about 1 week) at stage 09
Epoque d'observation :	Coléoptiles à complet développement (environ
Zeitpunkt der Erfassung:	1 semaine) au stade 09
	Voll entwickelte Blattscheiden (ca. 1 Woche)
	beim Stadium 09

Scale of recording/Echelle de notation/Prüfungsskala:

1. Coleoptile: anthocyanin coloration (in laboratory)	09	absent	absente	fehlend	1
		present	présente	vorhanden	9
Coléoptile : pigmentation anthocyanique (au laboratoire)					
Keimscheide: Anthocyanfärbung (im Labor)					
2. Coleoptile: intensity of anthocyanin coloration (as for 1.)		very weak	très faible	sehr gering	1
		weak	faible	gering	3
		medium	moyenne	mittel	5
		strong	forte	stark	7
		very strong	très forte	sehr stark	9
Coléoptile : intensité de la pigmentation anthocyanique (comme pour 1.)					
Keimscheide: Stärke der Anthocyanfärbung (wie unter 1.)					

Note:	At least one of the example varieties should be included as a control
Observation :	Au moins une variété indiquée à titre d'exemple doit être utilisée comme témoin
Bemerkungen:	Mindestens eine der Beispielssorten sollte als Kontrolle mitgeprüft werden

## ANNEX III

METHOD FOR THE DETERMINATION OF THE PHENOL REACTION OF WHEAT  
METHODE DE DETERMINATION DE LA REACTION AU PHENOL CHEZ LE BLE  
METHODE ZUR BESTIMMUNG DER PHENOLFÄRBUNG BEI WEIZEN

Number of grains per test:	50 grains for distinctness, 100 grains for homogeneity
Nombre de grains par essai :	(the grains should be untreated by chemicals)
Anzahl Körner pro Prüfung:	50 pour la possibilité de distinction, 100 pour l'homogénéité (les grains ne doivent pas avoir subi de traitement chimique)
	50 Körner für die Unterscheidbarkeitsprüfung, 100 Körner für die Homogenitätsprüfung (die Körner sollten nicht chemisch behandelt worden sein)
Equipment:	Petri dishes, filter paper
Equipement :	Boîtes de Pétri, papier filtre
Geräte:	Petri-Schalen, Filterpapier
Preparation of grains:	Soak in tap water for about 16 to 20 hours, drain and remove surface water, place the grains with crease downwards
Préparation des grains :	Tremper dans l'eau du robinet pendant 16 à 20 heures environ, égoutter et essuyer, placer les grains le sillon vers le bas
Vorbereitung der Körner:	In Leitungswasser für etwa 16 bis 20 Stunden einweichen, abtropfen lassen und Oberflächenwasser entfernen, Körner mit Bauch nach unten legen
Concentration of solution:	1 per cent phenol solution
Concentration de la solution :	solution de phénol à 1%
Konzentration der Lösung:	1%ige Phenollösung
Amount of solution per sample:	The grains should be immersed for about 3/4 of their depth
Quantité de solution par échantillon :	Les grains doivent être immergés aux 3/4 environ
Lösungsmenge pro Muster:	Die Körner sollten zu etwa 3/4 bedeckt sein
Place:	Laboratory
Lieu :	Laboratoire
Ort:	Labor
Light:	Daylight - out of direct sunshine
Lumière :	Lumière du jour - à l'abri du soleil
Licht:	Tageslicht - nicht unter direkter Sonneneinstrahlung
Temperature:	Room temperature
Température :	Température du laboratoire
Temperatur:	Zimmertemperatur
Time of recording:	4 hours after immersion
Epoque d'observation :	4 heures après immersion
Dauer der Erfassung:	4 Stunden nach Eintauchen

## Scale of recording/Echelle de notation/Prüfungsskala:

37. Grain: coloration with phenol	none or very light	nulle ou très faible	fehlend oder sehr hell	1
Grain : coloration au phénol	light	faible	hell	3
Korn: Phenolfärbung	medium	moyenne	mittel	5
	dark	foncée	dunkel	7
	very dark	très foncée	sehr dunkel	9

Note:	At least one of the example varieties should be included as a control
Note :	Au moins une variété indiquée à titre d'exemple doit être utilisée comme témoin
Bemerkungen:	Mindestens eine der Beispielssorten sollte als Kontrolle mitgeprüft werden

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## ANNEX IV

METHOD FOR THE DETERMINATION OF THE DDT REACTION OF BARLEY  
METHODE DE DETERMINATION DE LA REACTION AU DDT CHEZ L'ORGE  
METHODE ZUR BESTIMMUNG DES VERHALTENS GEGENÜBER DDT BEI GERSTE

Number of seedlings per test: 50 seedlings for distinctness, 100 seedlings for  
 Nombre de plantules par essai : homogeneity  
 Anzahl Keimlinge pro Prüfung: 50 pour la possibilité de distinction, 100 pour  
 l'homogénéité  
 50 Keimlinge für die Unterscheidbarkeitsprüfung,  
 100 Keimlinge für die Homogenitätsprüfung

Equipment: Wooden boxes, compost, pressure sprayer  
 Equipement: Caisses en bois, compost, pulvérisateur  
 Geräte: Holzkisten, Kompost, Druckzerstäuber

Material: High quality powder or liquid  
 Produits : Poudre ou liquide de haute qualité  
 Material: Puder oder Lösung hoher Qualität

Concentration of solution:  
 Concentration de la solution : 0,25%  
 Konzentration der Lösung:

Stage of spraying: 1st time : stage 11-12  
 Epoque de pulvérisation : 2nd time : 5-7 days later  
 Stadium des Sprühens 1ère fois : stade 11-12  
 2e fois : 5 à 7 jours plus tard  
 1. Sprühen im Stadium 11 bis 12  
 2. Sprühen 5 bis 7 Tage später

Place: Greenhouse  
 Lieu : serre  
 Ort: Gewächshaus

Light: Continuous light (daylight plus artificial light)  
 Lumière : Lumière continue (lumière du jour plus artificielle)  
 Licht: Dauerlicht (Tageslicht und Kunstlicht)

Temperature: 15 - 25°C  
 Température :  
 Temperatur:

Time of recording: 5-10 days after 2nd spraying depending upon  
 Epoque d'observation : development of symptoms  
 Zeitpunkt der Erfassung: 5 à 10 jours après la deuxième pulvérisation,  
 en fonction du développement des symptômes  
 5 bis 10 Tage nach dem Sprühen je nach Ausbildung  
 der Symptome

Scale of recording/Echelle de notation/Prüfungsskala:

Reaction to DDT	susceptible	sensible	anfällig	1
Réaction au DDT	resistant	résistante	resistent	2
Reaktion gegenüber DDT				

Note: A susceptible example variety should be included  
 as a control  
 Observation : Une variété sensible indiquée à titre d'exemple  
 doit être utilisée comme témoin  
 Bemerkungen: Eine anfällige Sorte sollte als Kontrolle mitge-  
 prüft werden

[End of Annex IV  
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