



**European Union**  
**Community Plant Variety Office**

**PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS**

*Xerochrysum* Tzvelev (Synonym: *Bracteantha* Anderb. & Haegi)

**EVERLASTING DAISY, STRAWFLOWER**

**UPOV Species Code: XEROC**

**Adopted on 1<sup>st</sup> December 2005**

## **I - SUBJECT OF THE PROTOCOL**

The protocol describes the technical procedures to be followed in order to meet the requirement of Council Regulation 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/205/1 dated 09/04/2003 for the conduct of tests for Distinctness, Uniformity and Stability. This protocol applies to all varieties of *Xerochrysum Tzvelev* (*synonym: Bracteantha Anderb. & Haegi*) of the family *Asteraceae*.

## **II - SUBMISSION OF PLANT MATERIAL**

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of:

- the closing date for the receipt of plant material;
- the minimum amount and quality of plant material required;
- the examination office to which material is to be sent.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office:

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. If no or unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3. Plant material requirements:

Information with respect to closing dates and submission requirements of plant material for the technical examination of varieties can be found on the CPVO website ([www.cpvo.europa.eu](http://www.cpvo.europa.eu)) and in the special Issue S2 of the Official Gazette of the Office published yearly in the month of September.

Quality :..... The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease, especially virus.

The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given

Labelling of sample: ..... - Species  
- File number of the application allocated by the CPVO  
- Breeder's reference  
- Examination reference (if known)  
- Name of applicant  
- The phrase "On request of the CPVO".

### **III - CONDUCT OF TESTS**

#### **1. Variety collection:**

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a reference collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

It is the responsibility of Examination Office to keep the variety collection up to date.

#### **2. Material to be examined:**

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties.

### 3. Characteristics to be used:

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in Annex 1. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted. In the later case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation N° 1239/95, to insert additional characteristics and their expressions in respect of a variety.

### 4. Grouping of varieties:

The varieties and candidates to be compared will be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The characters used for grouping are the following:

- (a) Plant: type (characteristic 1)
- (b) Leaf: variegation (characteristic 12)
- (c) Involucre: number of colours (characteristic 26)
- (d) Involucre: main colour (characteristic 27)

### 5. Trial designs and growing conditions:

The minimum duration of tests will normally be one growing cycle if the results on distinctness and uniformity are conclusive. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

#### The test design is as follows:

As a minimum, each test should include a total of 20 plants for vegetatively propagated varieties and 40 plants for seed propagated varieties. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

All observations on single plants for vegetatively propagated varieties determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants and any other observations should be made on all plants in the test, three to six-months old.

All observations on single plants for seed propagated varieties determined by measurement or counting should be made on 20 plants or 20 parts taken from each of 20 plants and any other observations should be made on all plants in the test, three to six-months old.

The test should normally be conducted at one place.

The test should be carried out in the glasshouse, under conditions ensuring normal growth.

#### 6. Special tests:

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the test that a candidate has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

#### 7. Standards for decisions:

##### **a) Distinctness**

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation No. 2100/94.

##### **b) Uniformity**

For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least 95% should be applied.

For a sample size between 6 and 35 plants for vegetatively propagated varieties, only 1 off-type is allowed.

For a sample size between 36 and 82 plants for seed propagated varieties which are self-pollinated, only 2 off-types are allowed.

For the assessment of uniformity of seed propagated open pollinated and hybrid varieties, relative uniformity standards should be applied.

### **c) Stability**

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

## **IV - REPORTING OF RESULTS**

After each growing cycle the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after one growing cycle but in some cases two or more growing cycles may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not the reasons for failure and a summary of the test results will be included with the final report.

The CPVO must receive interim reports and final reports by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

## **V - LIAISON WITH THE APPLICANT**

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report and final report shall be sent by the Examination Office to the CPVO.

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## ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
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Legend:	
QL Qualitative characteristic	
QN Quantitative characteristic	
PQ Pseudo-qualitative characteristic	
(+) See explanations on the Table of characteristics	
(a)- (c) See explanations on the Table of Characteristics	
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## ANNEX II

Technical questionnaire

## ANNEX I TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note
<b>1.</b> (+) <b>QL</b>	<b>1.</b> (+) <b>QL</b>	<b>Plant: type</b>	basal clusters	Wanetta Gold 1
			bushy	Menindee Magic 2
<b>2.</b> <b>PQ</b>	<b>2.</b> <b>PQ</b>	<b><u>Bushy types only:</u></b> <b>Plant: growth habit</b>	upright	Menindee Magic 1
			semi-upright	Gold 'n' Bronze 2
			spreading	3
<b>3.</b> (+) <b>QN</b>	<b>3.</b> (+) <b>QN</b>	<b>Plant: height including flowers</b>	short	Menindee Magic 3
			medium	5
			tall	Wanetta Gold 7
<b>4.</b> (+) <b>QN</b>	<b>4.</b> (+) <b>QN</b>	<b>Plant: height of foliage</b>	short	Wanetta Gold, Menindee Magic 3
			medium	5
			tall	Golden Wish 7
<b>5.</b> <b>QN</b>	<b>5.</b> <b>QN</b>	<b>Plant: density</b>	sparse	Gold 'n' Bronze 3
			medium	Colourburst Gold, Colourburst Pink 5
			dense	Sunraysia Splendour, Menindee Magic 7



CPVO N°	UPOV N°	Characteristics	Examples	Note	
6. QN	6. QN	<b>Stem: hairiness</b>	absent or weak	1	
			medium	2	
			strong	3	
7. (+) QN	7. (+) QN	<b>(a) Leaf: length</b>	very short	1	
			short	Sweet Sensation	3
			medium	Golden Wish	5
			long	Yellow Gem	7
			very long		9
8. (+) QN	8. (+) QN	<b>(a) Leaf: width</b>	narrow	Gold 'n' Bronze	3
			medium	Sweet Sensation	5
			broad	Yellow Gem	7
9. (+) QN	9. (+) QN	<b>(a) Leaf: ratio length/ width</b>	small	Golden Wish	3
			medium	Yellow Gem	5
			large	Lemon Mist	7
10. (+) QN	10. (+) QN	<b>(a) Leaf: position of broadest part</b>	lower third		1
			middle third		2
			upper third		3

CPVO N°	UPOV N°	Characteristics	Examples	Note	
11. PQ	11. PQ	(a) Leaf: shape of apex	acuminate	1	
			acute	2	
			obtuse	3	
			rounded	4	
12. QL	12. QL	(a) Leaf: variegation	absent	1	
			present	9	
13. PQ	13. PQ	(a) Leaf: main colour of upper side	yellow green	Colourburst Gold, Colourburst Pink	1
			light green	Menindee Magic	2
			medium green	Gold 'n' Bronze	3
			dark green	Coolgardie Gold	4
			grey green		5
14. QN	14. QN	(a) Leaf: hairiness of upper side	absent or weak		1
			medium		2
			strong		3
15. QN	15. QN	(a) Leaf: hairiness of lower side	absent or weak		1
			medium		2
			strong		3
16. QN	16. QN	(a) Leaf: undulation of margin	absent or weak		1
			medium		2
			strong		3

CPVO N°	UPOV N°	Characteristics	Examples	Note	
17. (+) QN	17. (+) QN	<b>Flowering shoot: length</b>	short	Coolgardie Gold	3
			medium	Broome Pearl	5
			long	Gold 'n' Bronze	7
18. (+) QN	18. (+) QN	<b>Flowering shoot: branching</b>	absent or weak		1
			medium		2
			strong		3
19. (+) QL	19. (+) QL	<b>Flower bud: profile of apex</b>	pointed	Dargan Hill Monarch White	1
			rounded	Gold 'n' Bronze	2
20. (+)PQ	20. (+) PQ	<b>Flower bud: main colour</b>	RHS Colour Chart (indicate reference number)		
21. (+) QN	21. (+) QN	(c) <b>Flower head: predominant position in relation to foliage</b>	slightly below to slightly above	Coolgardie Gold	1
			moderately above	Dargan Hill White	2
			far above	Wanetta Gold	3
22. QN	22. QN	(c) <b>Flower head: diameter</b>	very small	Diamond Head	1
			small	Argyle Star, Gold 'n' Bronze	3
			medium	Broome Pearl	5
			large	Wanetta Gold	7
			very large		9

CPVO N°	UPOV N°		Characteristics	Examples	Note
23. (+) QN	23. (+) QN	(c)	<b>Flower head: side view of <u>lower</u> part</b>	concave	1
				flat	2
				convex	3
24. (+) QN	24. (+) QN	(c)	<b>Flower head: side view of <u>upper</u> part</b>	concave	1
				flat	2
				convex	3
25. QN	25. QN	(c)	<b>Flower head: number of bracts</b>	few	Citron Spice 3
				medium	Pink Star 5
				many	Yellow Gem 7
26. (+) QL	26. (+) QL	(c)	<b>Involucre: number of colours</b>	only one	Lemon Colourburst 1
				more than one	2
27. PQ	27. PQ	(c)	<b>Involucre: main colour</b>	white	1
				yellow	2
				orange	3
				pink	4
				red	5
28. (+) QN	28. (+) QN	(b)	<b>Bract: length</b>	short	Golden Yellow 3
		(c)		medium	Dargan Hill White 5
				long	Golden Wish, Princess of Wales 7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
29. (+) QN	29. (+) QN	(b) <b>Bract: width</b> (c)	narrow	Golden Yellow	3
			medium	Dargan Hill White, Golden Wish, Princess of Wales	5
			broad		7
30. (+) QN	30. (+) QN	(b) <b>Bract: ratio length/width</b> (c)	as long as broad		1
			twice as long as broad	Dargan Hill Apricot	2
			three times as long as broad	Dargan Hill White, Golden Wish	3
			four times as long as broad	Sweet Sensation	4
31. (+) PQ	31. (+) PQ	(b) <b>Bract: main colour of <u>lower</u></b> (c) <b>third of bract from <u>inner</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)		
32. (+) PQ	32. (+) PQ	(b) <b>Bract: main colour of <u>middle</u></b> (c) <b>third of bract from <u>inner</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)		
33. (+) PQ	33. (+) PQ	(b) <b>Bract: main colour of <u>upper</u></b> (c) <b>third of bract from <u>inner</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)		
34. (+) PQ	34. (+) PQ	(b) <b>Bract: main colour of <u>lower</u></b> (c) <b>third of bract from <u>middle</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Characteristics	Examples	Note
35. (+) PQ	35. (+) PQ	(b) <b>Bract: main colour of <u>middle</u></b> (c) <b>third of bract from <u>middle</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)	
36. (+) PQ	36. (+) PQ	(b) <b>Bract: main colour of <u>upper</u></b> (c) <b>third of bract from <u>middle</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)	
37. (+) PQ	37. (+) PQ	(b) <b>Bract: main colour of <u>lower</u></b> (c) <b>third of bract from <u>outer</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)	
38. (+) PQ	38. (+) PQ	(b) <b>Bract: main colour of <u>middle</u></b> (c) <b>third of bract from <u>outer</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)	
39. (+) PQ	39. (+) PQ	(b) <b>Bract: main colour of <u>upper</u></b> (c) <b>third of bract from <u>outer</u></b> <b>third of involucre</b>	RHS Colour Chart (indicate reference number)	
40. PQ	40. PQ	(b) <b>Pappus: colour</b> (c)	white yellow yellow green	Colourburst Pink 1 2 3 Colourburst Gold

## EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

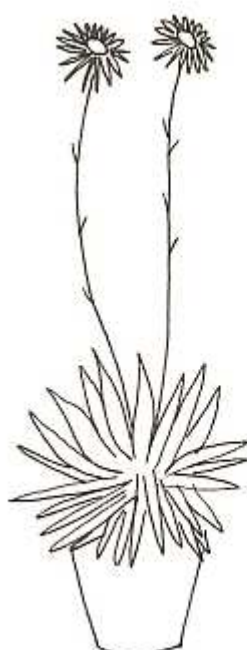
### Explanations covering several characteristics

Characteristics containing the following key in the third column of the Table of Characteristics should be examined as indicated below:

- (a) Observations on leaves should be made on fully expanded leaves. For bushy plant types, observations should be made on a leaf taken from the middle part of the flowering shoot. For basal clusters plant types, observations should be made on a leaf taken from the middle part of the cluster.
- (b) Bract length and width, bract colour and pappus colour should be recorded after removing bracts from the flower head. For observations on bract length and width, observations should be made on a bract taken from the middle row of the involucre.
- (c) Observations on the flower head, involucre, bracts and pappus should be made when one third of the florets in the flower head have opened.

### Explanations for individual characteristics

#### Ad. 1: Plant: type



1  
basal clusters

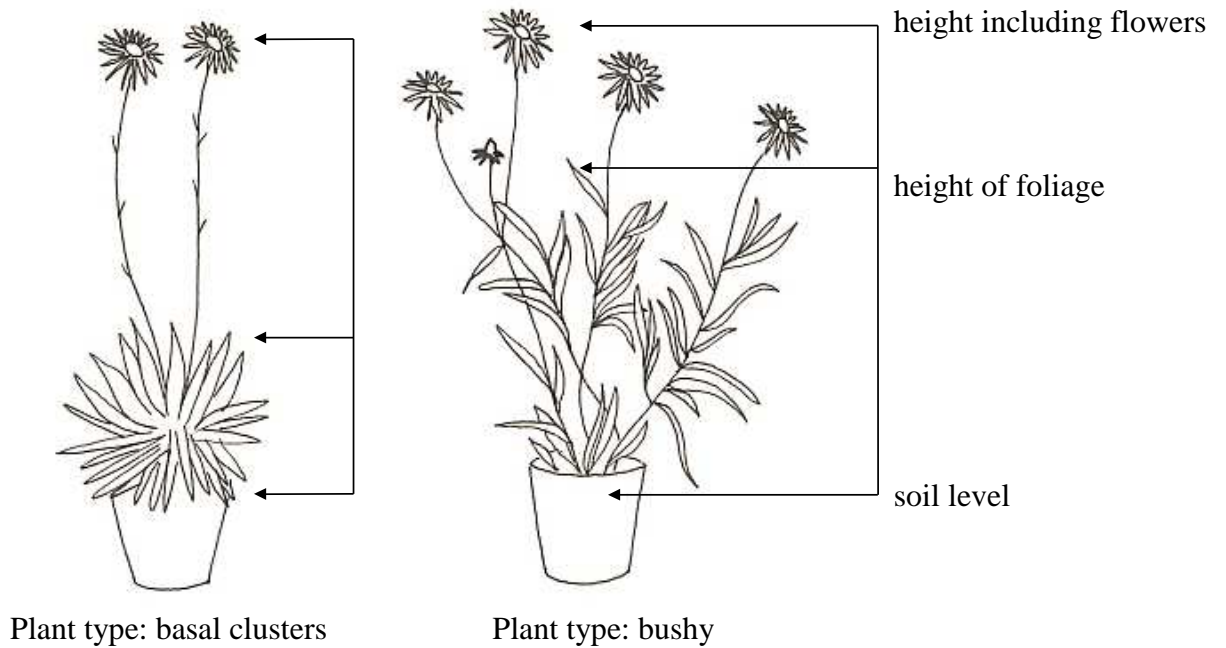


2  
bushy

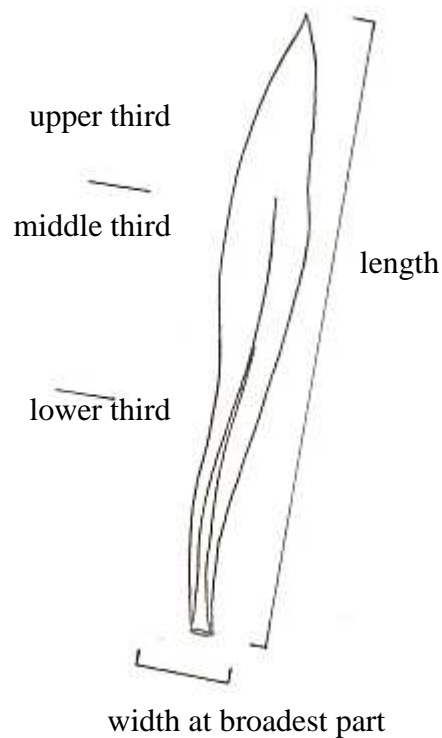
Ads. 3, 4: Plant: height including flowers (3) , height of foliage (4)

Plant height including flowers should be measured from soil level to the top of the plant including the flowers when one third of florets have opened on the first flower head.

Plant height of foliage should be measured from soil level to the top of the foliage when one third of florets have opened on the first flower head.



Ads. 7, 8, 9, 10: Leaf: length (7), width (8), ratio length/width (9) and position of broadest part (10)

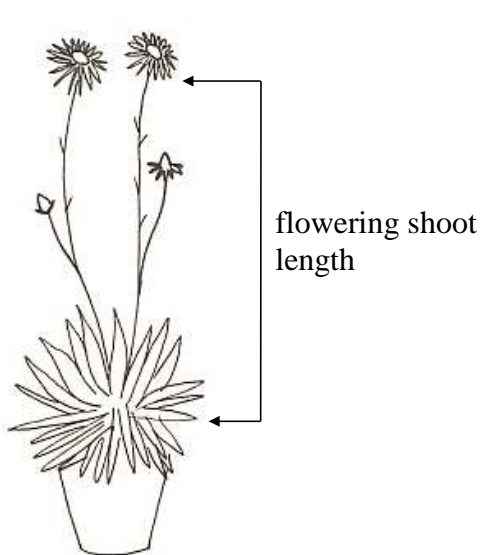




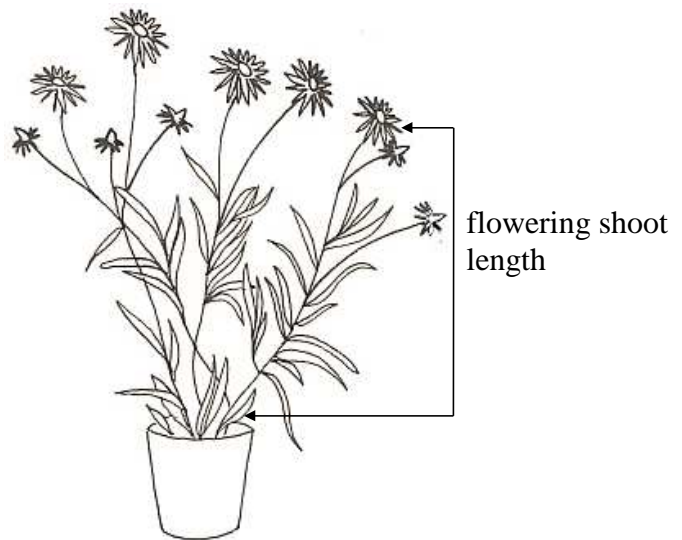
Ad. 17: Flowering shoot: length

To be assessed when one third of the florets have opened on the first flower head on the flowering shoot.

Measure length from the base of the flower to the point where the flowering shoot attaches to the main stem of the plant.



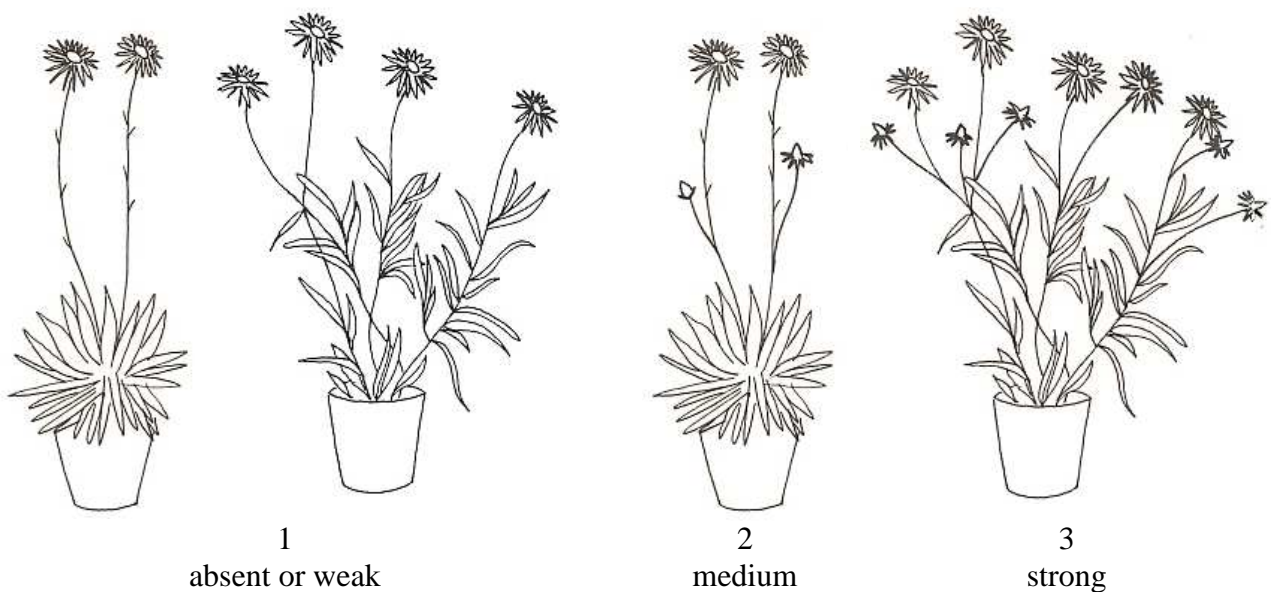
Plant type: basal clusters



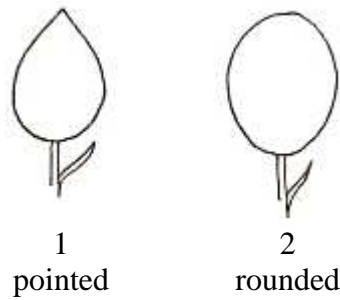
Plant type: bushy

Ad. 18: Flowering shoot: branching

To be assessed when one third of the florets have opened on the first flower head on the flowering shoot.



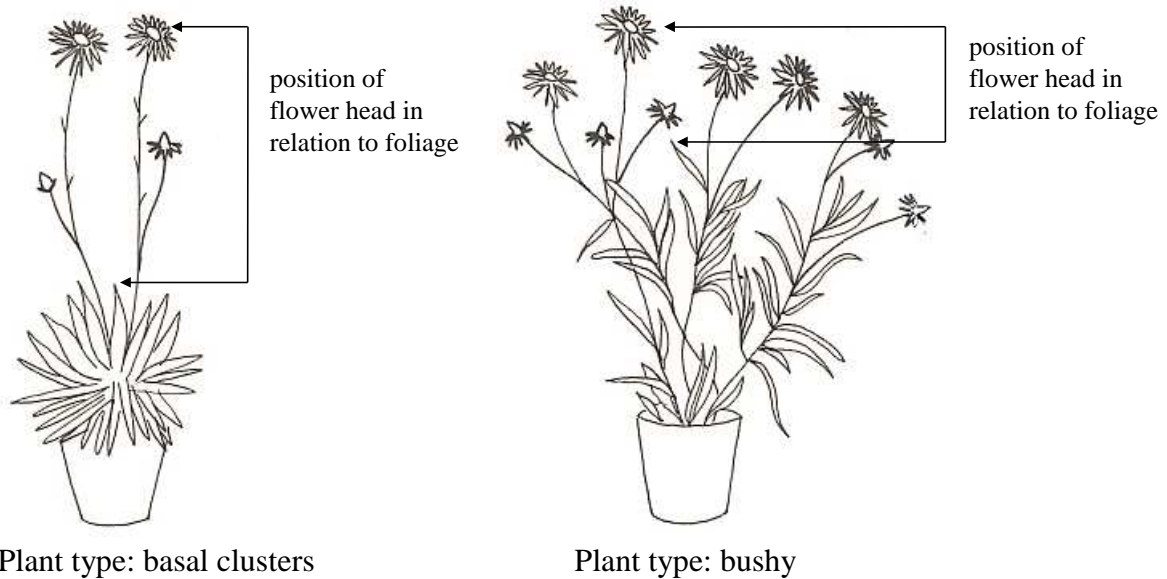
Ads. 19, 20: Flower bud: profile of apex (19), main colour (20)



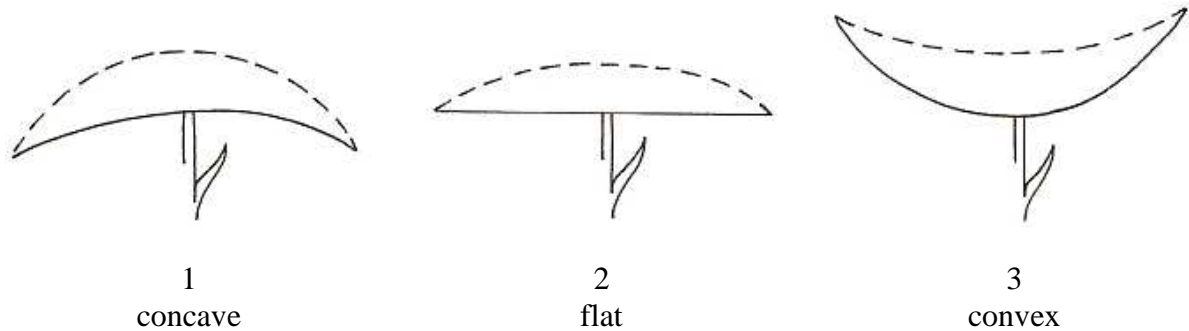
Observations on the flower bud should be made on the largest bud immediately prior to reflexing of the lower bracts.

Flower bud main colour should be recorded after removing a bract from the middle third of the bud. The colour of the middle third of the outside of the bract should be assessed.

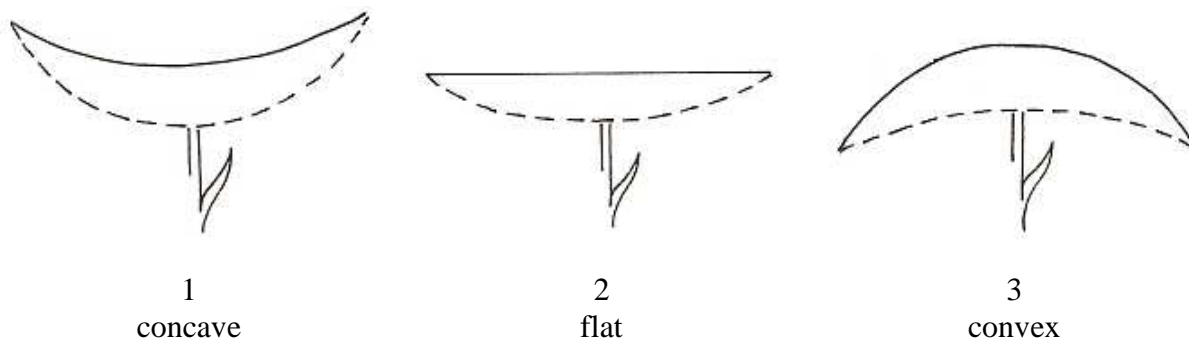
Ad. 21: Flower head: predominant position in relation to foliage



Ad. 23: Flower head: side view of lower part



Ad. 24: Flower head: side view of upper part



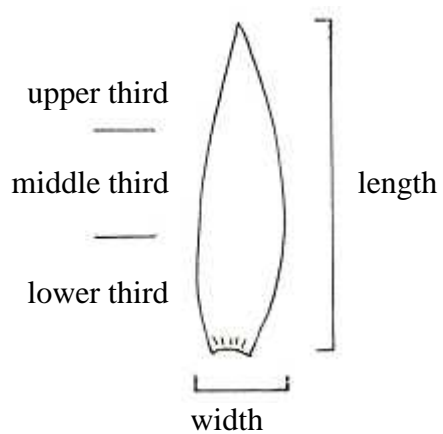
Ad. 26: Involucre: number of colours

Observations should be made on the involucre as a whole, with no bracts removed.

Only one: one colour can be observed, e.g. white; or more than one colour can be observed but all the colours observed fall into one colour grouping as outlined in characteristic 27, eg. light yellow, medium yellow and dark yellow.

More than one: the colours that can be observed fall into more than one colour grouping as outlined in characteristic 27, eg. yellow and orange.

Ads. 28, 29, 30, 31-39: Bract: length (28) and width (29), ratio length/width (30),  
main colour of lower/middle/upper third of bract from  
inner/middle/outer third of involucre



## **LITERATURE**

Clarke, I., Lee, H., 1989: Name that Flower, Melbourne University Press, Melbourne, 260 pp.

Harden, G.J., 1992: Flora of New South Wales, Volume 3, New South Wales University Press, Kensington, pp. 236-237.

## **ANNEX II**

The Technical Questionnaire is available on the CPVO website under the following reference:  
CPVO-TQ/205/1