



**TWA/28/7**

**ORIGINAL:** English

**DATE:** April 20, 1999

**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
GENEVA

**TECHNICAL WORKING PARTY  
FOR  
AGRICULTURAL CROPS**

**Twenty-Eighth Session  
Ottawa, June 22 to 25, 1999**

COMMENTS ON THE TEST GUIDELINES FOR SUNFLOWER

*Document prepared by the experts from France*

***This document summarises the proposals I received from the experts from France considering the new draft document TG/81/4(proj.) on SUNFLOWER.***

**Characteristic 26 (height of plant):** Considering the variability we observe in France among the inbred lines and the hybrids, we are not in favor to split the characteristic “height of plant” in two characteristics (you can reproduce the graph enclosed). As example varieties we propose :

note 1	HA 379
note 3	HA 291
note 5	DK 3790
note 7	ELISOL, ODIL, NOVASOL.

**Characteristic 15 (Shape of ray flower):** Drawings are enclosed.

Besides these comments, we still have strong problems with four characteristics (4, 11, 16 and 23), which are not well defined to describe what we observe:

**Characteristic 4 (Leaf: Shape):** We propose to assess this characteristic from the lanceolate shape towards the rounded shape with the intermediate steps triangular shape and cordate shape. The full scale would be:

- 1 lanceolate
- 2 elongated triangular
- 3 triangular
- 4 rounded triangular
- 5 triangular to cordate
- 6 elongated cordate
- 7 cordate
- 8 rounded cordate
- 9 rounded

This classification is based on the description in combination of the basal part and the distal part of the leaf blade. The application of this scale is rather easy and with a better correspondence to the variability observed.

We propose that experts of other countries check this scale and we will prepare example varieties for the next meeting.

**Characteristic 11 (Leaf blade: attitude):** We consider that this characteristic is strongly influenced by the climatic conditions and water supply. In addition, we really have difficulties to make the observations and we think it is due to the fact that we describe two characteristics in one (angle of the petiole and attitude of the leaf blade relative to the petiole).

We propose to delete this characteristic.

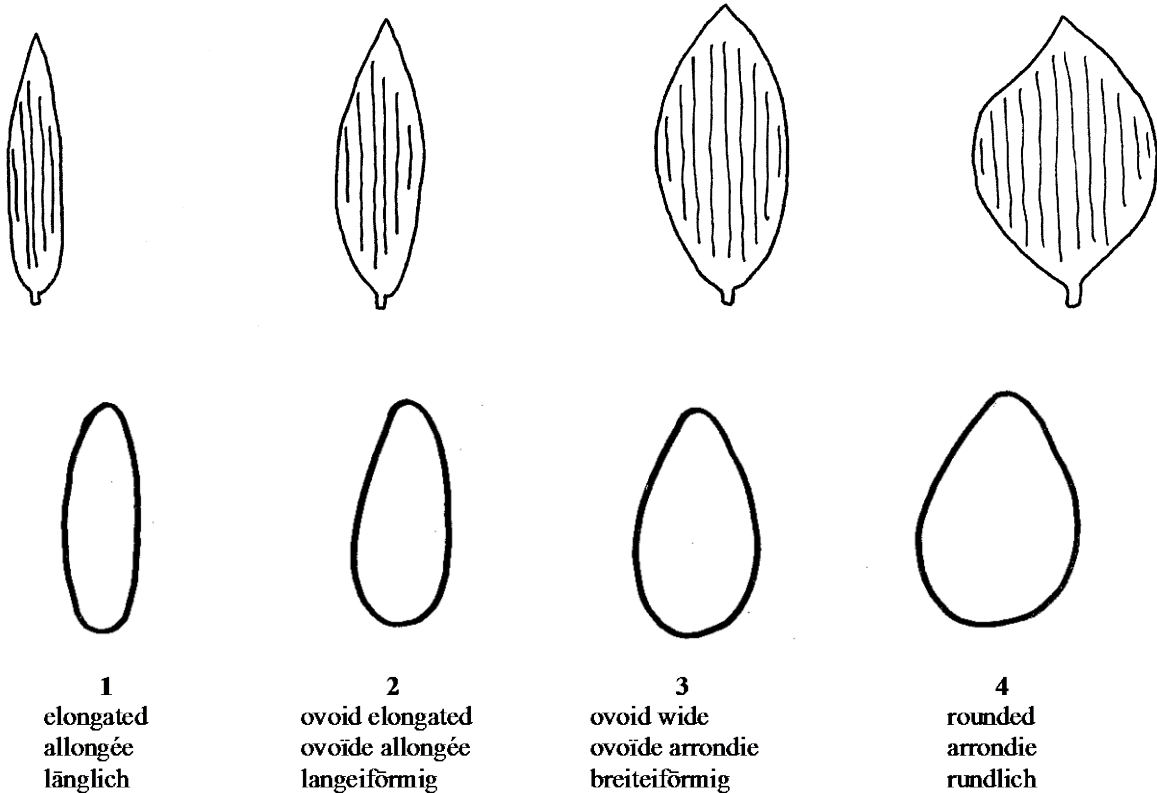
**Characteristic 16:** We have strong difficulties to assess this characteristic, mainly because it is not uniform and strongly influenced by the date of flowering of each plant. The scale is too complex and we would be in favor of a most simple scale or to delete the characteristic.

**Characteristic 23 (Bract: Shape):** We proposed this characteristic with a state “triangular”. In fact, we now propose to change the states of expression as follows :

- 1 elongated
- 2 intermediate
- 3 rounded

In such a way, it could be very efficient to distinguish the varieties with note 1 and note 3, but the limits between 1 and 2, or 2 and 3 are not easy to determine.

Caractères 15 et 35 (forme des fleurs ligulées et forme de la graine) : Les dessins sont prêts.



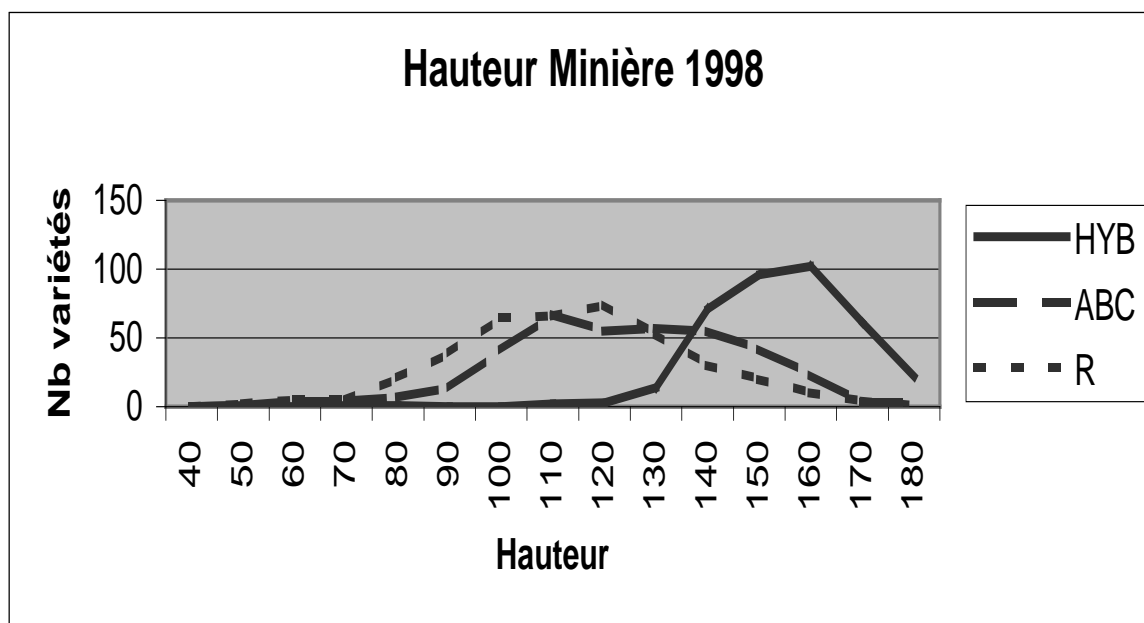
Littérature : « UPDATE ON INHERITANCE OF SUNFLOWER CHARACTERISTICS » de J. F. MILLER, USDA – ARS, NORTHERN CROP SCIENCE LABORATORY, FARGO, NORTH DAKOTA 58105

- **Hauteur de la plante (26.1 et 26.2) :**

Le graphique ci-dessous présente la distribution du caractère hauteur de la plante dans notre essais de la Minière, en fonction du type de variété.

On peut voir qu'il y a un certain chevauchement entre les différents types de matériel, d'autant plus que les valeurs minimales et maximales sont les suivantes :

Type de matériel	MINI	Maxi
Restaureurs	44	172
Femelles (ABC)	50	177
Hybrides	46	190



Pour cette raison, nous pensons qu'il serait préférable de ne faire qu'un seul caractère.

- **Attitude des bractées (27):**

Ce caractère nous paraît plus facile à noter entre les stades M0 et M2, plage de développement où le caractère est plus discriminant.

- **Position naturelle du capitule latéral le plus haut par rapport au capitule central (33) ) et port du capitule (28):**

Nous proposons de faire les notations à partir du stade M0, car ensuite elles sont plus difficiles à réaliser, sachant que les ramifications ont tendance à retomber. Ce phénomène n'est peut-être pas présent sous des climats plus secs qu'à la Minière.

[End of document]