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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

**TECHNICAL WORKING PARTY
FOR
AGRICULTURAL CROPS**

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COMMENTS ON THE TEST GUIDELINES FOR SUNFLOWER

Document prepared by the experts from Germany

COMMENTS ON THE TEST GUIDELINES FOR SUNFLOWER (TG/81/4 proj.)**• Definition of out-crosses**

As to paragraph 7 in chapter IV (population standard for electrophoresis characteristics) we have still comments after the discussion in the last TWA meeting in Angers:

When we fixed the criteria for out-crosses in maize the reasoning certainly was that if one locus is heterozygous (AX) this is probably due to non-uniformity of the inbred line. So we defined this case being an off-type.

On the other hand if the source of heterozygosity is out-crossing, there is a high probability that more than one locus is concerned. Therefore we defined in maize that an out-cross is heterozygous in at least two loci with all alleles of the female line.

If we define the out-cross as "... at least one locus heterozygous with one allele coming from the female ..." the uniformity standard will be laxer than in maize, as genuine non-uniformities are tolerated as out-crosses.

So we presume that the definitions in maize guidelines are correct and should be correct for sunflower as well. They should read as follows:

"All plants within an inbred line with two or more loci being heterozygous with one allele in each locus coming from the inbred line (e.g. AX) should be considered out-crosses. All other cases of heterozygosity as well as cases where two foreign alleles are present in one locus should be considered off-types."

• Characteristic11 (Leaf:attitude):

We propose to delete this characteristic.

• Characteristic16 and 17:

The growth stages indicated are obviously misprinted. They should be F.3.2.

• Characteristic 23 (Bract: shape):

The drawings are missing in chapter VIII.

• Characteristic 26 (Plant: natural height):

We are not in favor of splitting the characteristic in two characteristics for lines and hybrids.

• Characteristic 36 (Seed: thickness):

What is meant is most probably thickness in relation to width of the seed. So it might be better to say "Seed: thickness relative to width" instead of "... relative to size".

• Characteristics derived by using electrophoresis:

The heterozygous genotype should be added in all characteristics as proposed in the enclosed table.

Characteristics derived by using electrophoresis

	Example Varieties	Note
42. Allele expression at locus Me1		
Genotype 2/2	HA 89	1
Genotype 4/4	RHA 274	2
Genotype 2/4	Florence	3
43.- Allele expression at locus Pgd1		
Genotype 2/2	RHA 274	1
Genotype 4/4	HA 850	2
Genotype 2/4	Santafe	3
44. Allele expression at locus Pgi2		
Genotype 2/2	RHA 274	1
Genotype 4/4	H 559211	2
Genotype 2/4	Santafe	3
45 Allele expression at locus Shdh1		
Genotype 2/2	HA 89	1
Genotype 4/4	RHA 856	2
Genotype 2/4	Florence	3
46. Allele expression at locus Pgm4		
Genotype 2/2	RHA 274	1
Genotype 4/4	HA 89	2
Genotype 2/4	Florence	3

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