



TWA/41/6 Add.
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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF
PLANTS**
Geneva

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Forty-First Session
Angers, France, May 21 to 25, 2012


ADDENDUM

VARIETY DESCRIPTION DATABASES


Document prepared by an expert from France

The Annex to this document contains a copy of a presentation about reference collection and grouping characteristics, based on an example of the Pea species.

[Annex follows]





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Reference Collection and grouping characteristics

Example of the Pea species

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Montereve (USA, 2011) :

- TWV/45/24 “Partial Revision of the Test Guidelines for Pea (TG/7/10)”,
- TWV/45/6 “Variety Descriptions Databases”
- TWV/45/13 “Concept of a Database Containing Pea Variety Descriptions”

Background

Collection & Characteristics

Answer & Results

Conclusion


Goals :

- to define the **theoretical collection** of varieties of common knowledge
- to collect a maximum of **descriptions** of these varieties
- to define **reliable characteristics** for use as excluding characteristics

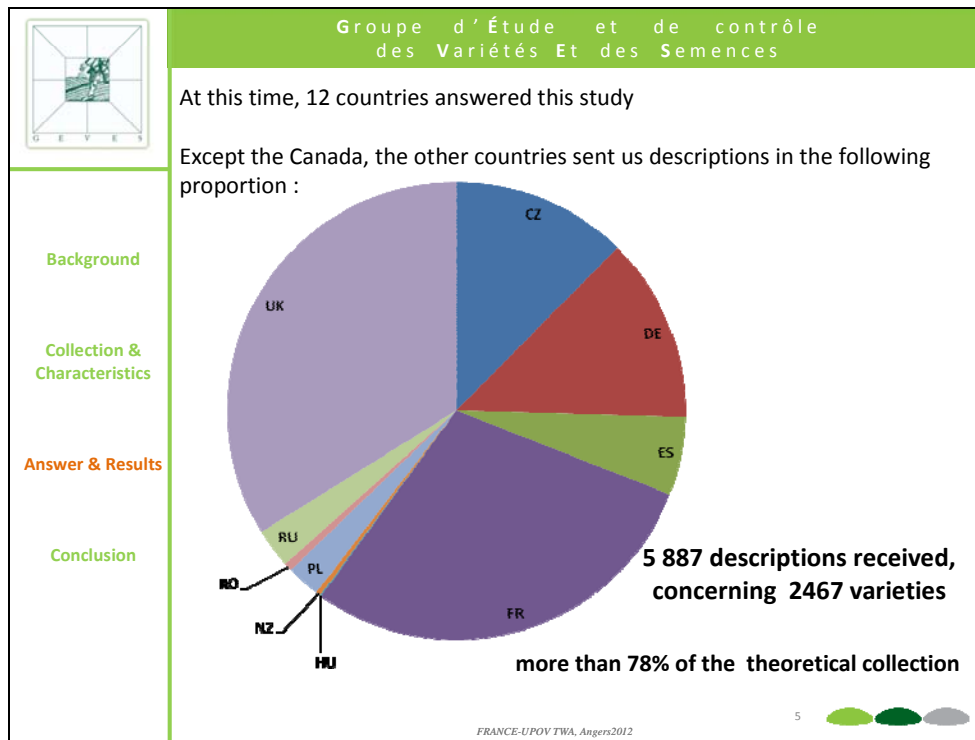
↳ = strong and discriminant characteristics

Aim :To obtain a Common Working Data Base


Helpful to use reference varieties in DUS examination.

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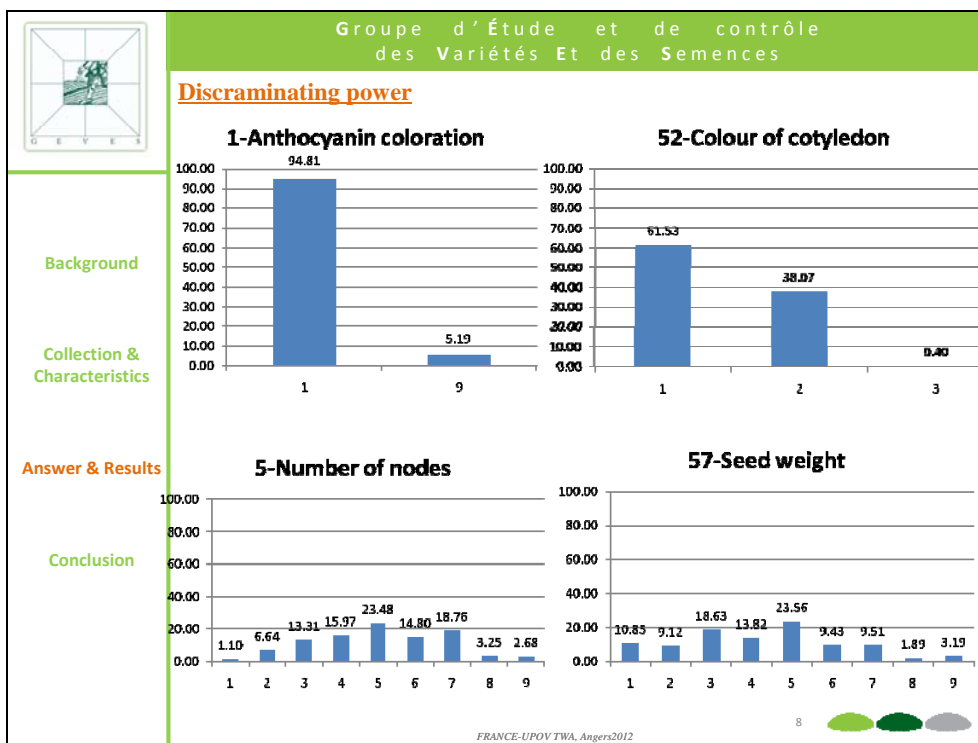
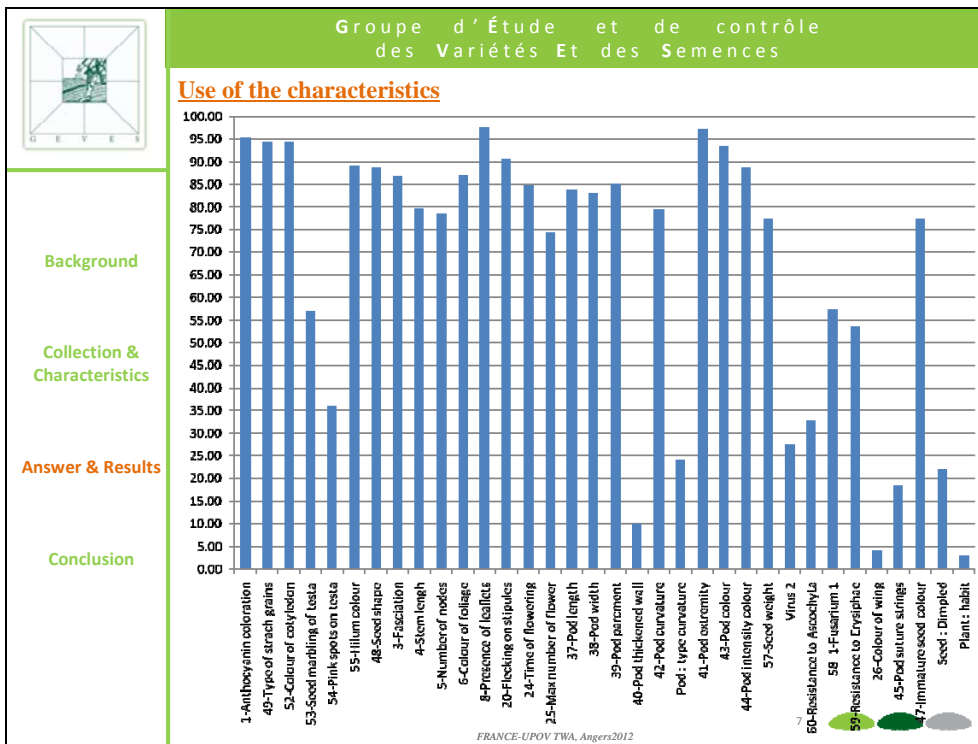


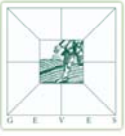
Properties of individual characters


Background	<p>➤ Use</p> <p>Number of time this characteristic is described / total number of described varieties</p>
Collection & Characteristics	<p>➤ Discriminating power</p> <p>% of excluded varieties on the basis of the character</p>
Answer & Results	<p>➤ Distortion</p> <p>Number of differences between descriptions concerning the same variety</p>
Conclusion	

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 <p>Distortion : Analysis performed only on those varieties for which we received more than one description.</p>					
		Number of varieties with # notes	Total number of varieties with more than 1 note	Percentage of distortion	
Background	<u>Qualitative characteristics :</u>				
Collection & Characteristics	1 : Anthocyanin coloration	11	1798	0.61	
	52 : Color of cotyledon	149	1784	8.35	
Answer & Results	8 : Presence of leaflets	33	1796	1.84	
	41 : Pod extremity	216	1784	12.11	
Conclusion	58-1 : Fusarium 1	81	1126	7.19	
	60 : Resistance to Ascochyta	12	328	3.66	% in red.
<p>Obviously, some differences are due to errors in notes transcriptions, using of wrong guidelines or observation of not true variety. Contact will be made to clarify some issues.</p>					
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 <p>Distortion : (Suite ...)</p>							
		Number of varieties with # notes	Total number of varieties with more than 1 note	Percentage of distortion	Differences between varieties		
Background	<u>Quantitative characteristics :</u>				1 note	2 notes	3 notes
Collection & Characteristics	5 : Number of nodes	1271	1404	90.53	371	531	276
					64.10	26.28	6.62
Answer & Results	4 : Stem length	1206	1413	85.35	401	396	235
					56.97	28.95	12.31
Conclusion	57 : Seed weight	1135	1387	81.83	475	400	168
					47.58	18.75	6.63
<p>% in red.</p>							
<p>For these continuous characteristics, special attention must be paid in term of distances between varieties.</p>							
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To conclude, it's possible to characterize each grouping character to help the experts to choose the best...

	Using	Discrimination	Distortion	
Background	1 : Anthocyanin coloration	95.26	95/5	0.61
Collection & Characteristics	52 : Color of cotyledon	94.36	60/40	8.35
	8 : Presence of leaflets	97.49	60/40	1.84
Answer & Results	41 : Pod extremity	97.20	75/25	12.11
	58 : Resistance to Fusarium	57.19	75/25	7.19
	60 : Resistance to ascochyta	32.87	80/20	3.66
Conclusion	5 : Number of nodes	78.49	64 -> 4/5/6	26.28
	4 : Stem length	79.65	47 -> 4/5/6	28.95
	57 : Seed weight	77.31	40 -> 4/5/6	18.75

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What is it possible to do ?

Relation for number of nodes between UK and FR on 875 varieties ...

	Number of nodes (Difference UK/FR)	Percentage of varieties
Background	-6	0.11
	-5	0.11
Collection & Characteristics	-4	1.03
	-3	16.46
	-2	49.83
Answer & Results	-1	29.60
	0	2.63
Conclusion	1	0.11
	2	0.11

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) 80 %

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Except for some errors, (to be clarified), more than 80 % of the varieties have one or two nodes less in UK than in FR.

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