UPOV
International Union for the Protection of New Varieties of Plants

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Technical Working Party for Agricultural Crops

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ADDENDUM TO:
DEVELOPING NEW CHARACTERISTICS FOR BARLEY VARIETY EXAMINATION

Document prepared by an expert from France

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The annex to this document contains a copy of a presentation “Possible new characteristics for Spring Barley variety examination”, to be made by an expert from France, at the fifty-third session of the Technical Working Party for Agricultural Crops (TWA).

[Annex follows]

Possible new characteristics for Spring Barley variety examination
TWA 2024

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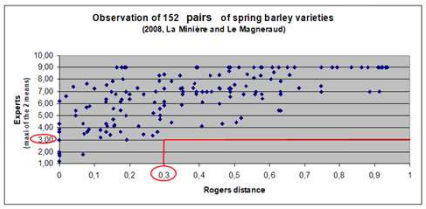
1

Distinctness issues for spring barley varieties

Breeding programs based on crosses within similar range of Western European germplasm
Mainly 1 type is applied: 2-rows varieties with anthocyanin coloration and glaucosity, without sterile spikelets (rudimentary) & very narrow time of ear emergence and plant length

→ All varieties are quite close with the current TG (range of characteristics on TG may not exploit the full range of variability within spring barley varieties)

→ Look for other characteristics which could help with distinguishing varieties, traditional observation of national characteristics in GEVES for spring barley & use of SSR markers to manage the variety collection since 2010 (model 2).



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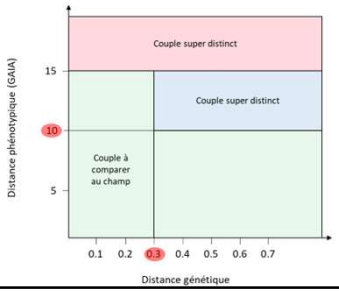


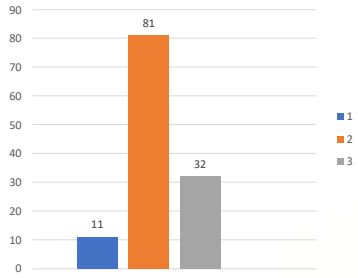
2

First proposal : Leaf : width, 3-notes scale, stage : 25-29, VG

Differences are observed in comparison plots
Characteristic observed in 2023

- ✓ Easy to observe
- ✓ No added workload (scored together with Plant: growth habit & Plant : intensity of green colour)

Distribution of notes for 124 varieties of spring barley in 2023:



1

3

Promising characteristic with discriminating power between varieties, could help for distinctness of spring barley varieties → will be observed again in 2024

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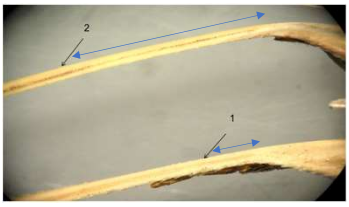
3

Second proposal : Awn : length of smooth part of median nerve, 5-notes scale, MS

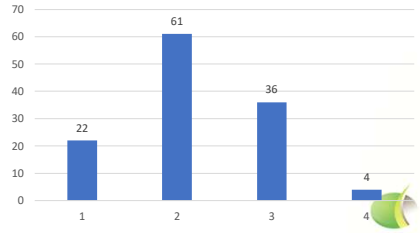
Traditional scale in GEVES : 4-notes. 5 notes would be more appropriate

QN	80-92	Awn : length of smooth part of median nerve		
	MS	short (fully rough)	KWS VERMONT CB CITUS	1
		short to medium (1 to 3 cm smooth at the basis)	DIVINER EIFEL	2
		medium (3 to 5 cm smooth at the basis)	TOLSTEFIX, CB CIRCUS	3
		medium to long (5 to 7 cm smooth at the basis)	LG AURUS ANNELI	4
		long (more than 7 cm to fully smooth)	ISMENA LEENKE	5



↔ Smooth part

Distribution of notes in 2023



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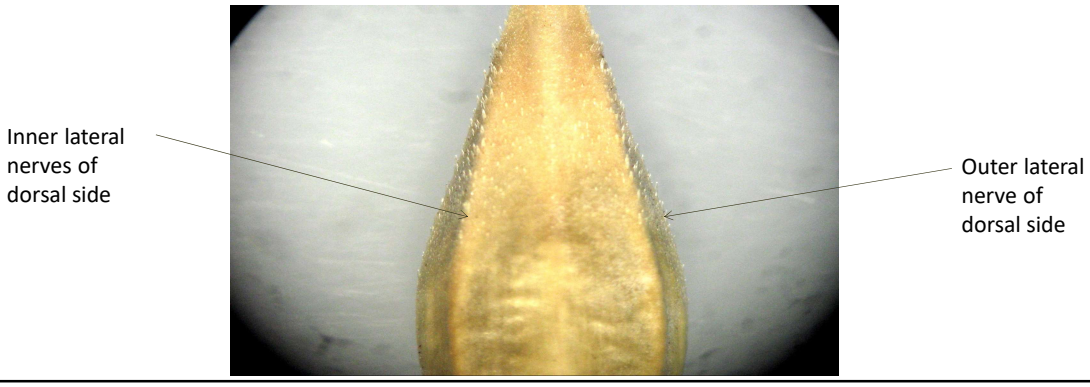
4

Third proposal : Grain : spiculation of outer lateral nerves of dorsal side of lemma, 9-notes scale

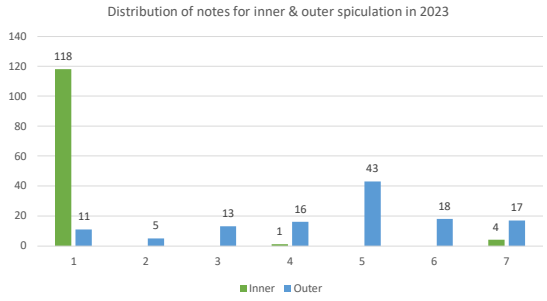
Existing characteristic in the TG : Grain: spiculation of inner lateral nerves of dorsal side of lemma
→ To be observed together, no increase of the workload

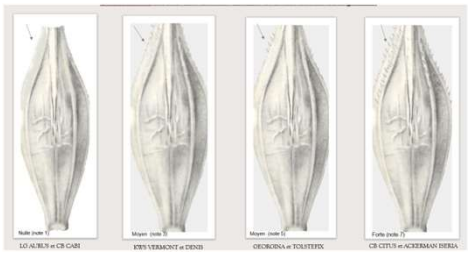
QN	80-92	Grain : spiculation of outer lateral nerves of dorsal side of lemma		
	VG	weak	KWS Vermont	3
		medium	Tolstefix	5
		strong	Ackermanns Isaria	7

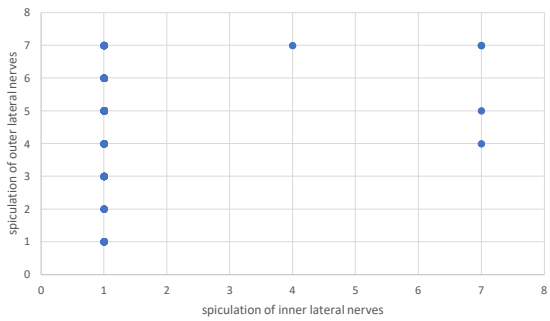


5

Third proposal : Grain : spiculation of outer lateral nerves of dorsal side of lemma, 9-notes scale







- No correlation between spiculation of inner lateral nerves and of outer lateral nerves
- More variability of outer lateral nerves

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[End of Annex and of document]