ISTA
Seed Quality Assurance

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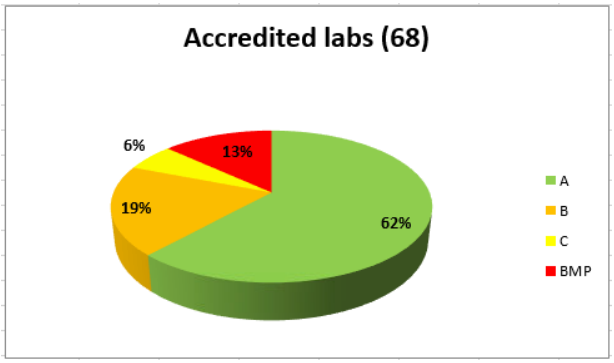
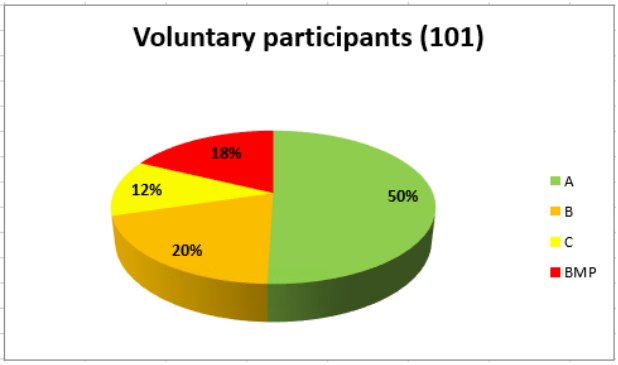
Summary results: PT 25-1 B.vul

Species: *Beta vulgaris* **Scope:** GER

GERMINATION Ratings **Total number of participants = 169**





Means and Standard Deviation
of the obligatory accredited participants
calculated for the category of normal seedlings

Categories	Mean Values %			Standard Deviation		
	Lot 1	Lot 2	Lot3	Lot 1	Lot 2	Lot 3
Normal seedlings	**95**	**96**	**92**	**1.69**	**2.11**	**3.59**
Abnormal seedlings	3	2	3	-	-	-
Non-germinated seed	2	2	5	-	-	-

Method used
overview for all participants.
presented for the temperature, substrate and pretreatment.

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20⇔30	33	53	**86**
20	32	42	**74**
15⇔25	3	4	7
10*		1	**1**
20⇔25*		1	**1**

*use of this temperature is not prescribed in the ISTA Rules

Substrate	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
PP	50	53	**103**
BP	12	26	**38**
TP	5	11	**16**
S	1	10	**11**
TPS*		1	**1**

*use of this substrate is not prescribed in the ISTA Rules

Pretreatment	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
No Treatment	62	84	**146**
Prewash*	0	7	**7**
Prechill	1	0	**1**
Light / No light Polyethylene envelope /H_2O	3	4	**7**
Not stated	2	6	**8**

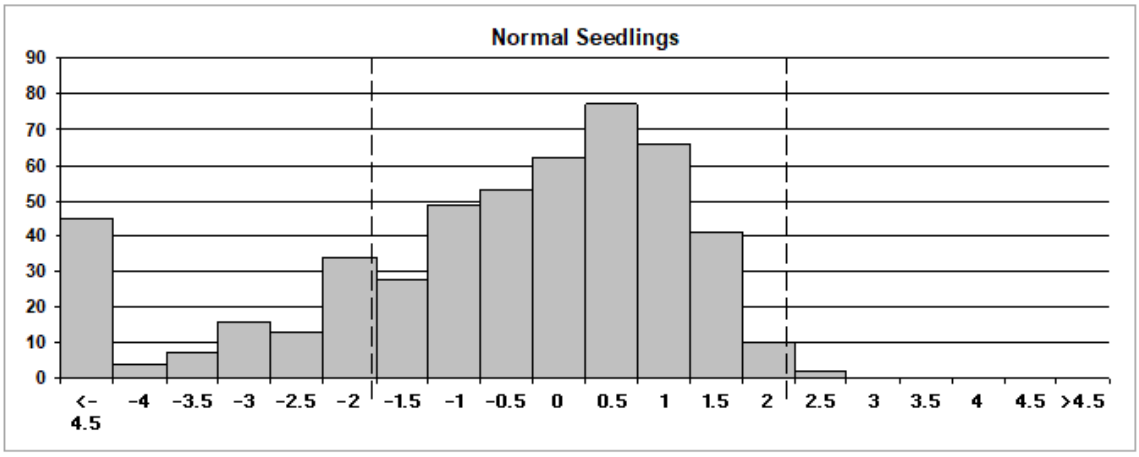
*these pre-treatments are not suggested in the ISTA Rules

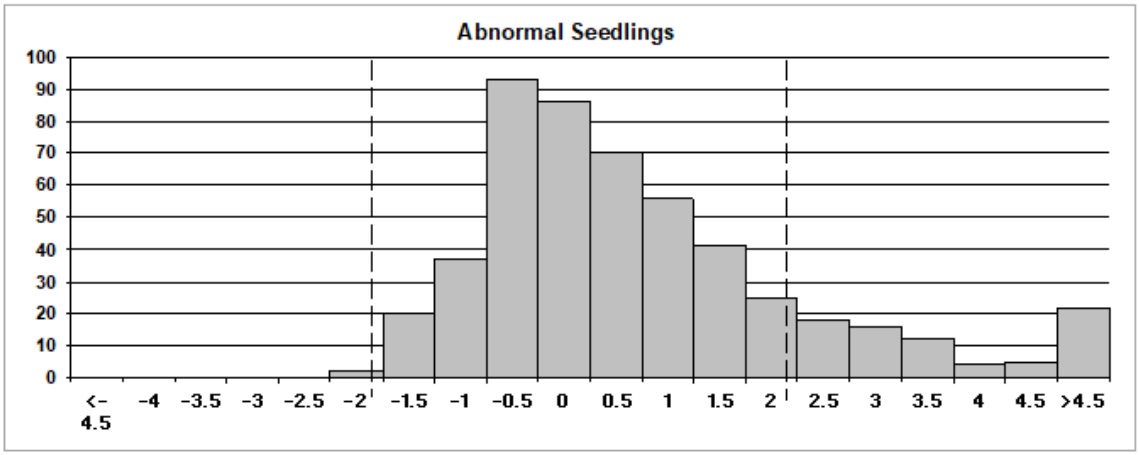
Z-score Distribution

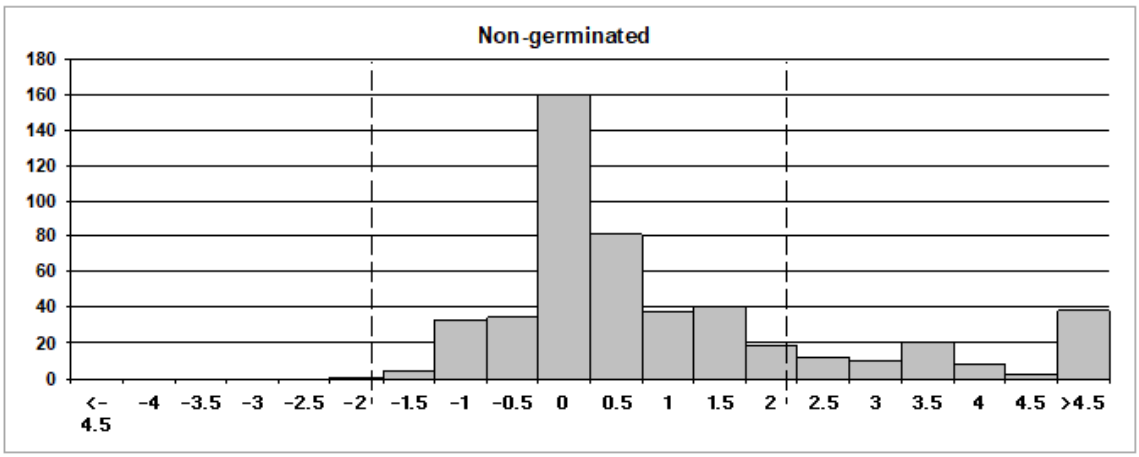
Proficiency Test Report – Test Round 25-1 B.vul

Species : Beta vulgaris **Scope:** Germination

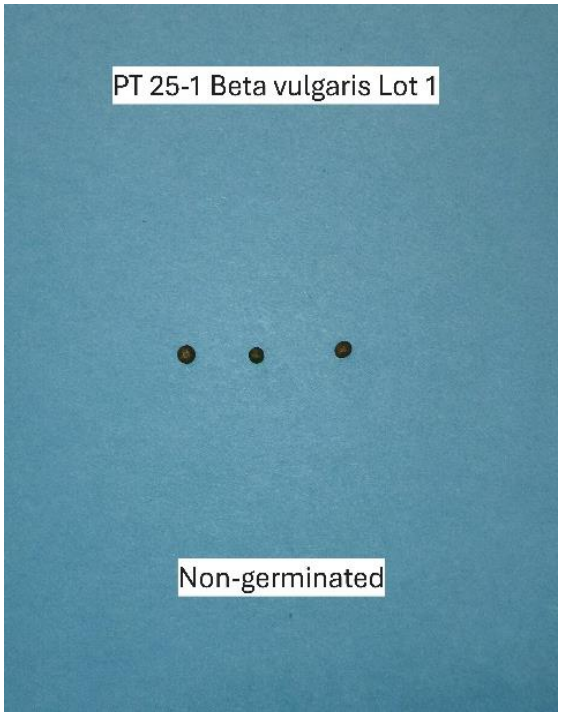
The following histograms show the frequency distributions of all participants Z-Scores for the relevant components, i.e. **Normal** and **Abnormal Seedlings** and **Non-germinated Seeds**. The Z-Scores from all three samples are included in each histogram. For further explanations, please refer to the document 'The ISTA Proficiency Test Programme'

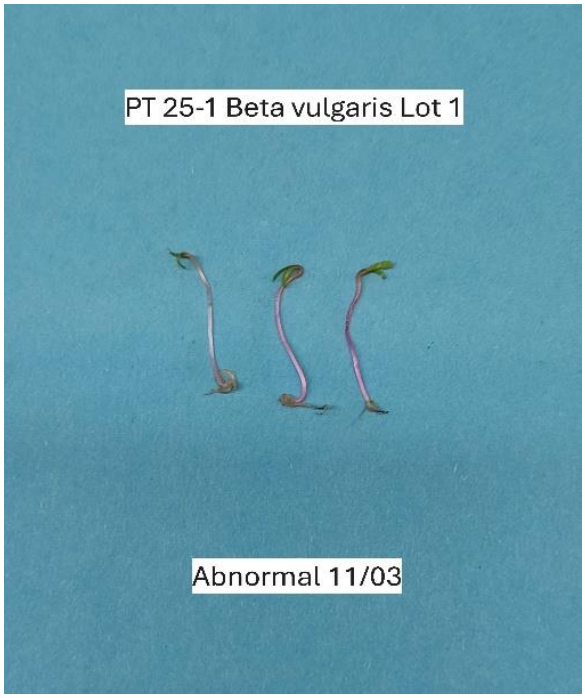


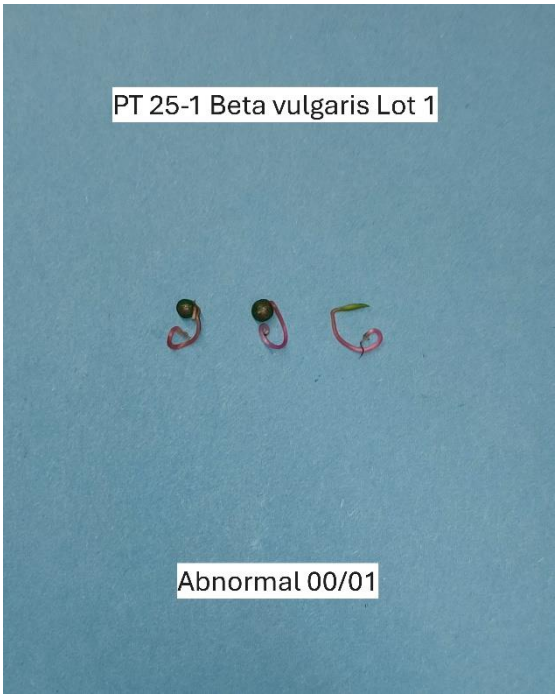




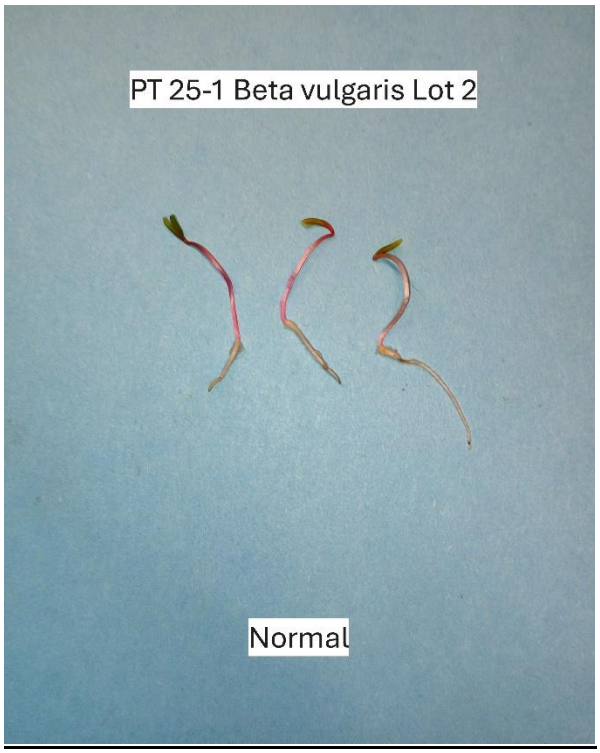
SEEDLINGS Lot 1

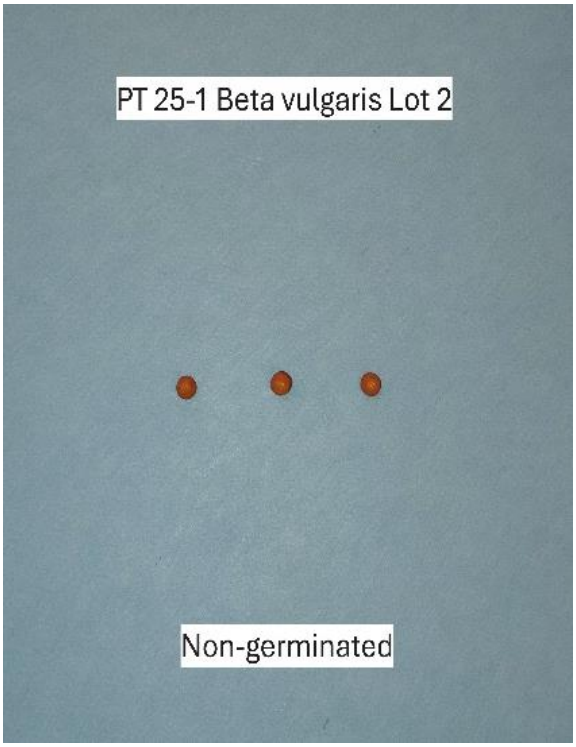


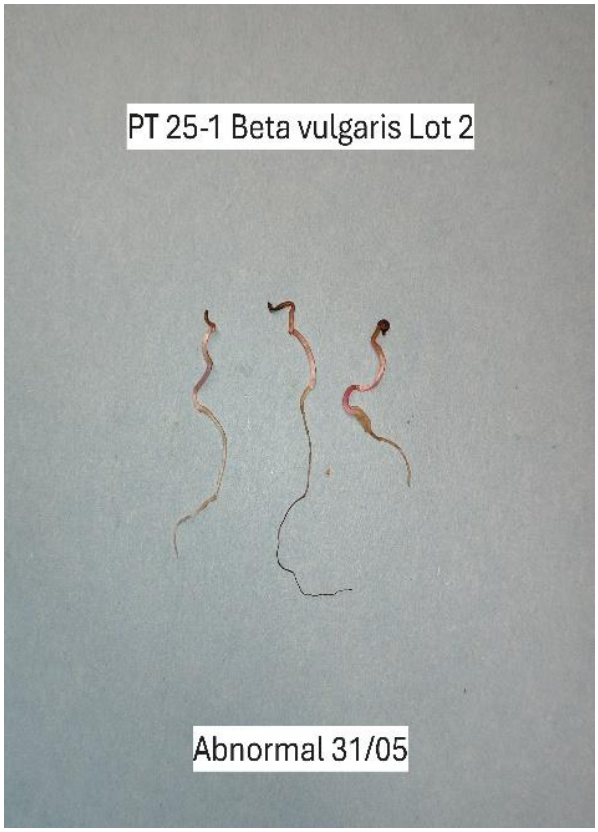


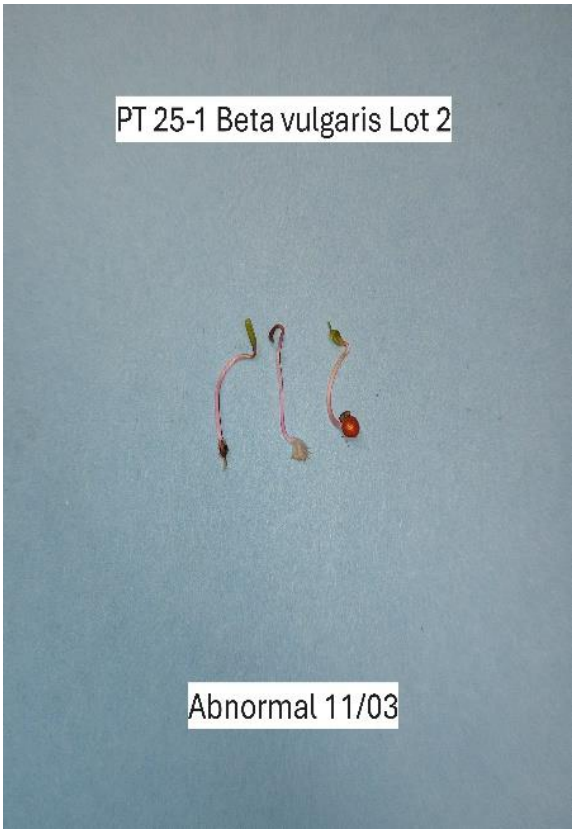


SEEDLINGS Lot 2

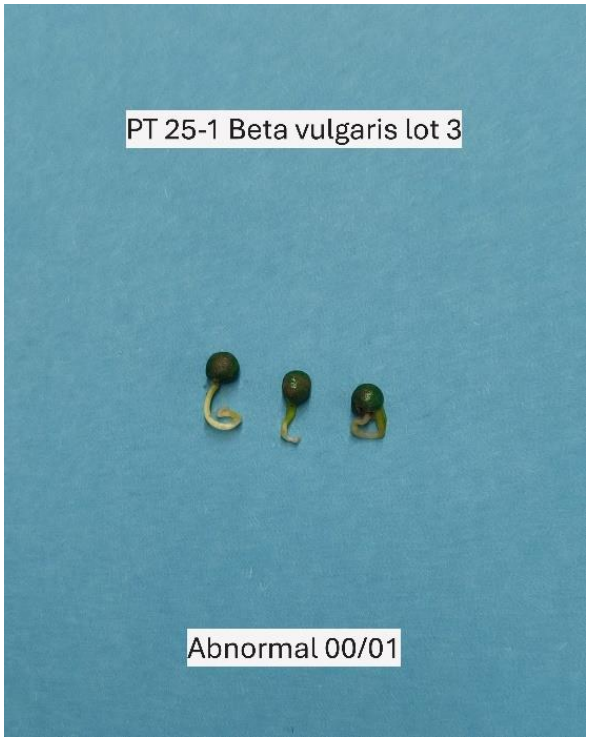








SEEDLINGS Lot 3



REPORTING ON THE ISTA ORANGE CERTIFICATES

This exercise was voluntary for all participants.
The completion of the certificate has a training purpose only and it is not rated.

Out of 169 participants, the completed certificate was submitted for review by 137 participants (81%). Out of 137 submissions, 61 were from the laboratories **accredited for coated seed** and 76 from non-accredited.

Quality of completing the certificates:

61 accredited laboratories		**76 non-accredited laboratories**	
NO error 39 labs	64%	NO error 16 labs	21%
Minor and major errors 22 labs	36%	Minor and major errors 15 labs	20%
Critical errors 0 labs	-	Critical errors 45 labs	59%
Critical error: certificate is invalid because of • Handwriting or • Stamp missing or b • Signature missing or • Date of issue missing or • Signs of data alternation/erasures			

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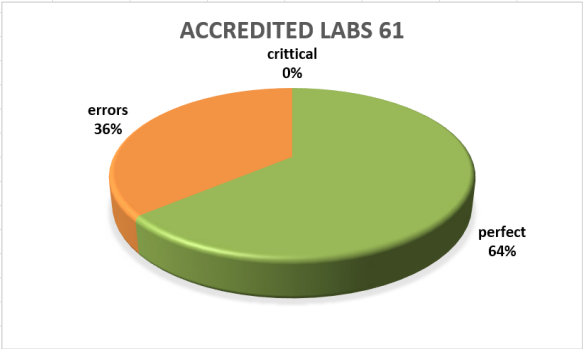

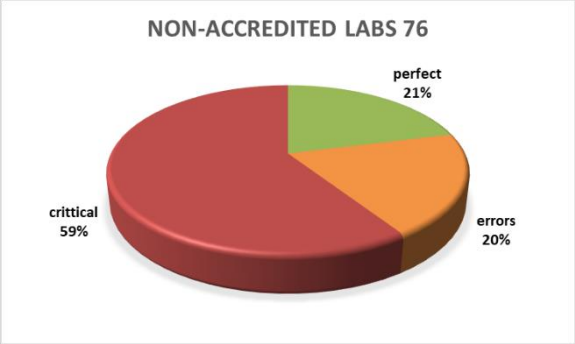

Each participating laboratory receives the personalised report on how the Orange Certificate was completed.

Main comments given for the certificates' completion

Two main comments were given to participants as feedback on the completion of the certificates:

- If the seeds tested are coated seeds, the species name must be followed by a description for the kind of coated seeds, e.g. the words "seed pellets", "encrusted seed", "seed granules", "seed tapes" or "seed mats" as applicable (ISTA Rules 11.3.7)

- Submitted samples must contain not less than the number of pellets or seeds indicated in column 2 of Tables 11A and 11B. If a smaller sample is used the following statement must be inserted on the certificate 'The sample submitted contained only .... pellets (seeds) and is not in accordance with the International Rules for Seed Testing' (ISTA Rules 11.2.5.4.4)

Additional remark

Several laboratories reported that they verified the species before performing the germination test (ISTA Rules 11.3.4). However, majority of the participants did not report on species verification.

As the tests requested for this PT Round only referred to germination and in the ISTA Rules, paragraph 11.3.4 are listed under Purity, no comments were given to the participants who omitted the statement on species verification.

11.3.4 Verification of species

In order to check that the seed in the pellets is largely of the species stated by the applicant, it is obligatory to remove the pelleting material from 100 pellets taken from the pure pellet fraction of the purity test and determine the species of each seed. The pelleting material may be washed off or removed in the dry state. Similarly 100 seeds must be removed from tapes and the identity of each seed determined.

For taped seed, depending on the material the tape is made of, strip off or dissolve away the tape so that 100 seeds can be examined. When the seeds in the tape are also pelleted, remove the pelleting material as indicated above.

This aspect needs to be observed by the laboratories and will be discussed with the Rules committee as well.