ISTA
Seed Quality Assurance

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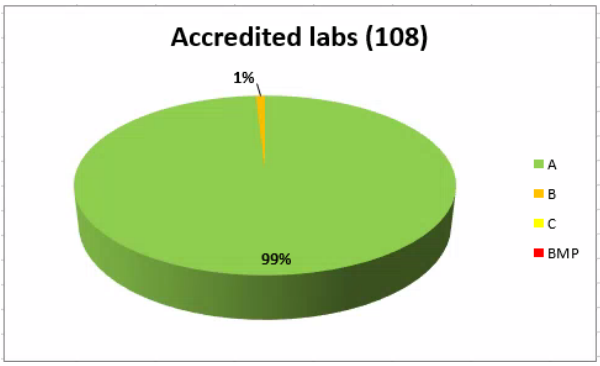
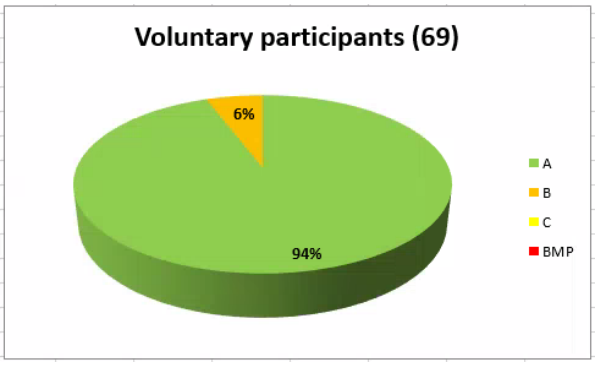
Summary report: PT 23-1 V.vil

Species: *Vicia villosa* **Scope:** PUR, OSD, GER

PURITY Ratings **Total number of participants = 177**





Means and Standard Deviation
of the obligatory accredited participants
calculated for the category of pure seed

Categories	Mean Values %			Standard Deviation		
	Lot 1	Lot 2	Lot3	Lot 1	Lot 2	Lot 3
Pure seed	**98.3**	**98.6**	**98.6**	**0.25**	**0.23**	**0.24**
Other seed	0.2	0.6	TR	-	-	-
Inert matter	1.5	0.8	1.4	-	-	-

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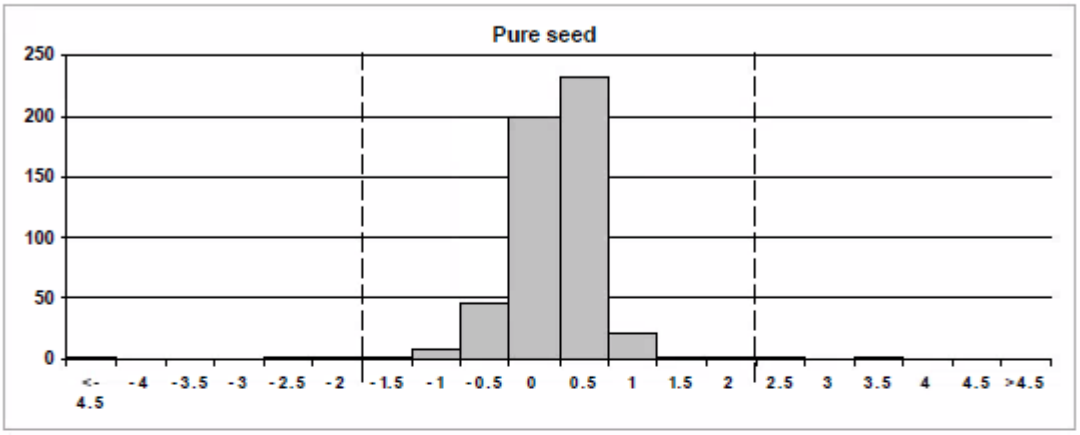
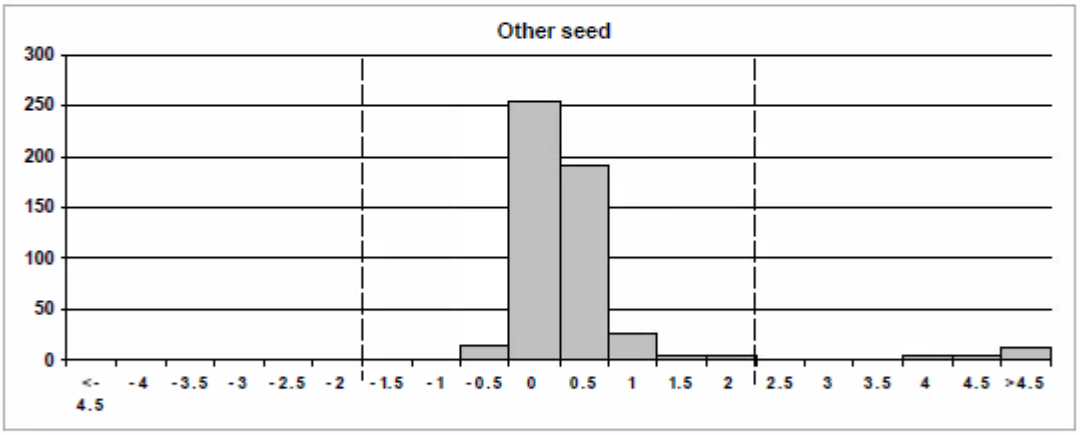
Z-score Distribution

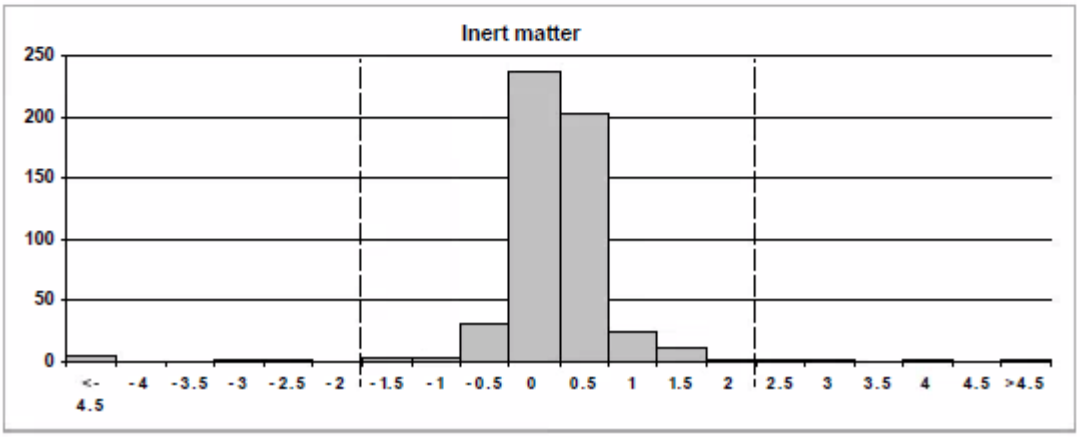
Proficiency Test Report – Test Round 23-1 V.vil

Species : Vicia villosa **Scope:** Purity

The following histograms show the frequency distributions of all participants Z-Scores for the relevant components, i.e. **Pure seed** and **Inert matter** and **Other seed**. 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'







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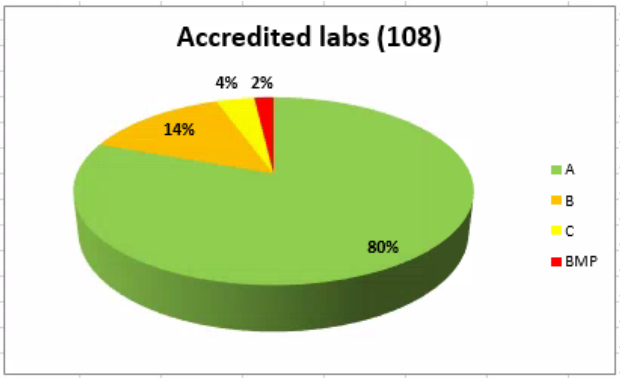
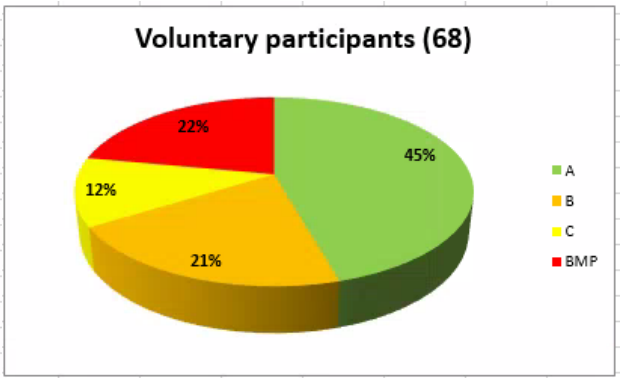
OSD Ratings

Total number of participants = 176





Retrieval rates

Proficiency Test Report - Test round 23-1 V.vil

Species: *Vicia villosa* **Scope:** Other Seed Determination

Average of seeds retrieved and identified correctly

The following table shows the retrieval rates of each species added by the test leader prior to sample dispatch. Every species that was added is assigned a value based on the actual retrieval rate of all seeds added. Thresholds are as follows:

>=90 % -> 3
>=85 % -> 2
<85 % -> 1

This score is multiplied with the number of seeds your laboratory reported and identified correctly. The percentage of retrieved and identified seeds is then determined and does define the in-round rating. The thresholds are as follows:

>=90 % -> A
>=80 % -> B
>=70 % -> C
<70 % -> BMP

For further details please refer to the document: "The ISTA Proficiency Test Programme".

Lot #		Species name	# of seeds added	Average # of seeds found	Retrieval rate [%]	Assigned factor
Lot 1						
	1	*Allium cepa*	3	2.5	83.6	1
	2	*Buglossoides arvensis*	3	2.3	75.5	1
	3	*Elymus repens*	2	1.5	74.6	1
	4	*Euphorbia lathyris*	2	1.7	82.8	1
	5	*Salvia sclarea*	3	2.6	86.9	2
Lot 2						
	1	*Digitaria sanguinalis*	3	2.6	88.2	2
	2	*Glebionis coronaria*	3	2.3	75.8	1
	3	*Lupinus angustifolius*	3	2.7	89.4	2
	4	*Salvia hispanica*	4	3.4	84.3	1
Lot 3						
	1	*Chondrilla juncea*	2	1.2	60.1	1
	2	*Setaria viridis*	3	2.5	83.2	1
	3	*Sinapis arvensis*	4	3.1	77.0	1

Note: several laboratories reported the outdates scientific names which could not be accepted for the results calculation: *Elytrigia repens* instead of *Elymus repens* and *Crysanthemum coronarium* instead of *Glebionis coronaria*

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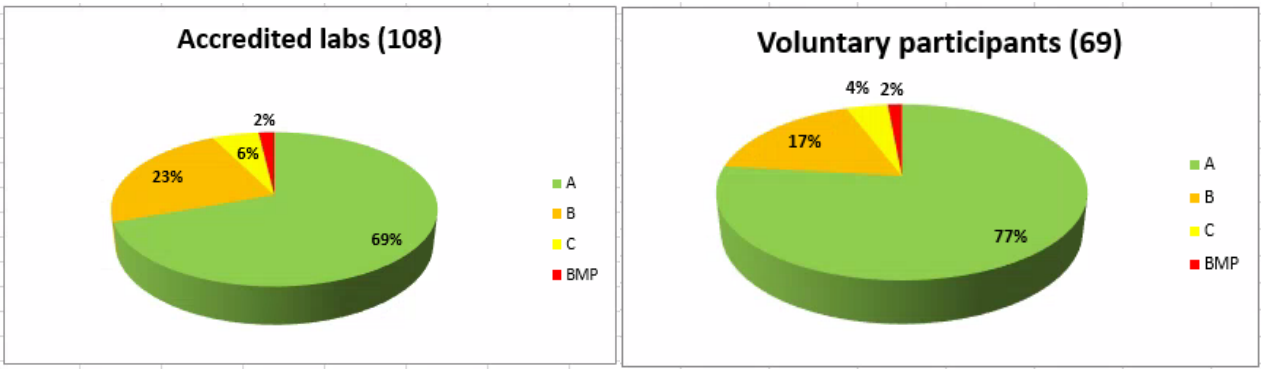
GERMINATION Ratings **Total number of participants = 177**



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	**82**	**83**	**77**	**6.63**	**6.26**	**8.45**
Abnormal seedlings	3	3	3	-	-	-
Non-germinated seed	15	14	20	-	-	-

Comment: A special requirement not to apply methods for hard seeds was given to participants, in order to obtain more homogenous results. However, the wide range of results for the category of normal seedlings is obtained, so that the standard deviation of the results is very high. The high standard deviation decreased the Z scores which led to the milder rating of the participants' results. It is also noticeable that the mean results of participants for the category of normal seedlings was significantly lower than the means obtained during the heterogeneity pre-test.

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

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20	106	67	**173**
15*		1	**1**
20⇔30*	1	1	**2**
Not reported	**1**		**1**

* this temperature is not prescribed in the ISTA Rules

Substrate	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
BP	57	43	**100**
S	27	16	**43**
PP	21	8	**29**
TP*	0	2	**2**
TS*	2	0	**2**
Not reported	1	0	**1**

* these substrates are not prescribed in the ISTA Rules

Pretreatment	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
No Treatment	72	49	**121**
Light or H_2O	3	1	**4**
Prechill	33	19	**52**

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Z-score Distribution

Proficiency Test Report – Test Round 23-1 V.vil

Species : Vicia villosa **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'