



INTERNATIONAL SEED TESTING ASSOCIATION (ISTA)

Secretariat, Zürichstrasse 50, 8303 Bassersdorf, CH-Switzerland

Phone: +41-44-838 60 00, Fax: +41-44-838 60 01, Email: ista.office@ista.ch, <http://www.seedtest.org>

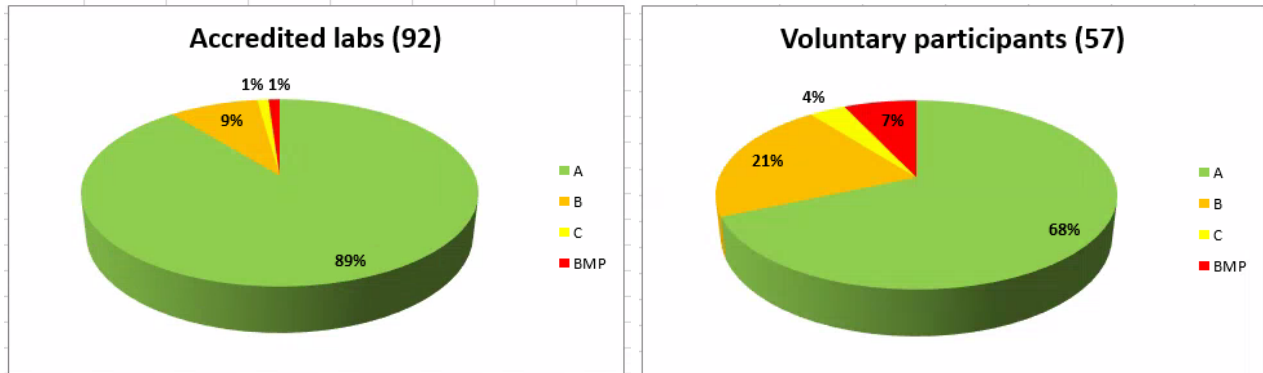
Summary results: PT 20-3 F.pra

Species: *Festuca pratensis*

Scope: PUR, OSD, GER

PURITY Ratings

Total number of participants = 149



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	Lot 3	Lot 1	Lot 2	Lot 3
Pure seed	98.9	98.9	99.7	0.43	0.21	0.10
Other seed	0.3	0.7	0.2	-	-	-
Inert matter	0.8	0.4	0.1	-	-	-



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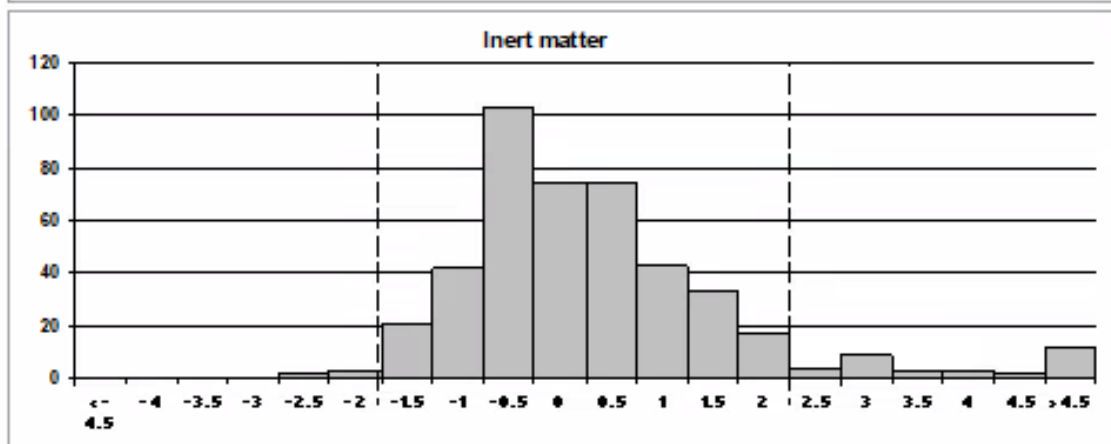
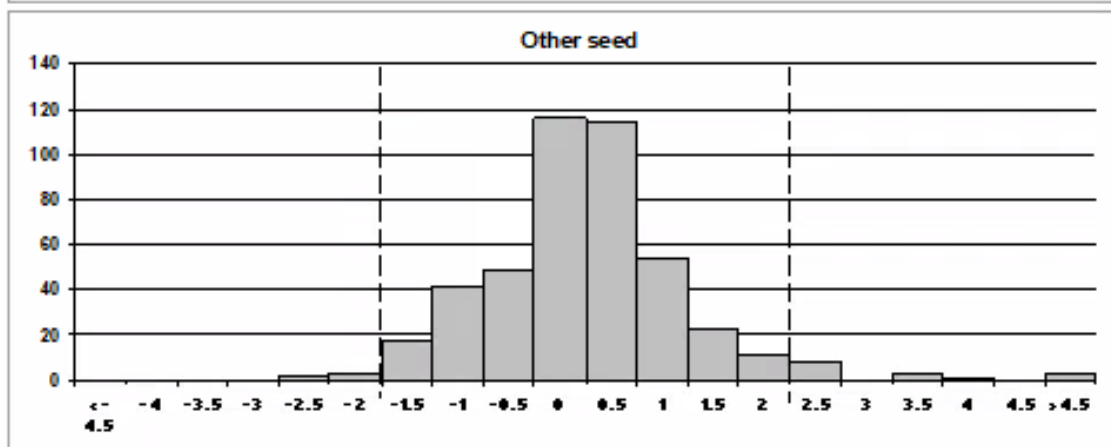
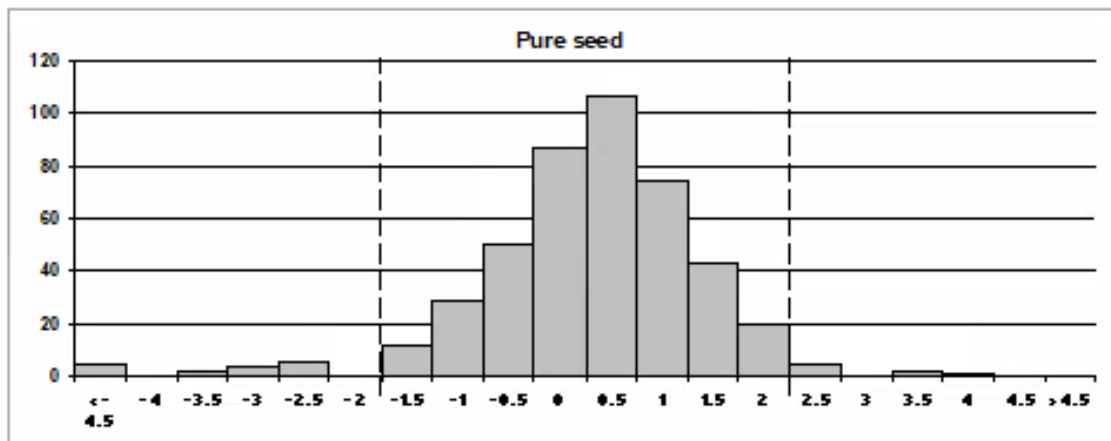
Z-score Distribution

Proficiency Test Report – Test Round 20-3 F.pra

Species : *Festuca pratensis*

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'





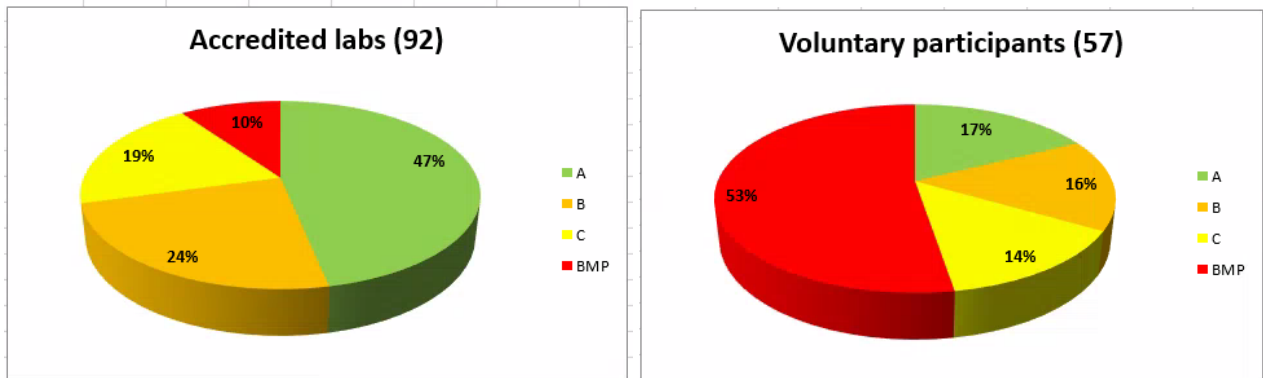
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OSD Ratings

Total number of participants = 149



Retrieval rates

Proficiency Test Report - Test round 20-3 F.pra

Species: *Festuca pratensis*

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 <i>Alopecurus pratensis</i>	2	1.7	82.8	1
	2 <i>Cynosurus</i> spp.	3	2.5	83.9	1
	3 <i>Hordeum jubatum</i>	2	0.8	40.1	1
	4 <i>Lolium</i> spp.	4	1.5	38.4	1
	5 <i>Poa annua</i>	3	2.4	81.5	1
Lot 2	1 <i>Arthenatherum elatius</i>	4	2.8	70.3	1
	2 <i>Deschampsia cespitosa</i>	3	2.0	65.5	1
	3 <i>Elymus repens</i>	2	0.8	38.6	1
	4 <i>Holcus lanatus</i>	2	1.4	70.5	1
	5 <i>Sanguisorba minor</i>	3	2.4	80.1	1
Lot 3	1 <i>Anthoxanthum odoratum</i>	3	2.6	86.7	2
	2 <i>Bupleurum rotundifolium</i>	2	1.6	81.0	1
	3 <i>Dactylis glomerata</i>	4	2.2	54.7	1
	4 <i>Poa pratensis</i>	3	2.4	81.3	1
	5 <i>Poa trivialis</i>	4	3.2	78.9	1

Note: 8 participants reported *Elymus repens* as *Elytrigia repens* or *Elytrigia* genus, which is the former stabilized name for *Elymus repens*



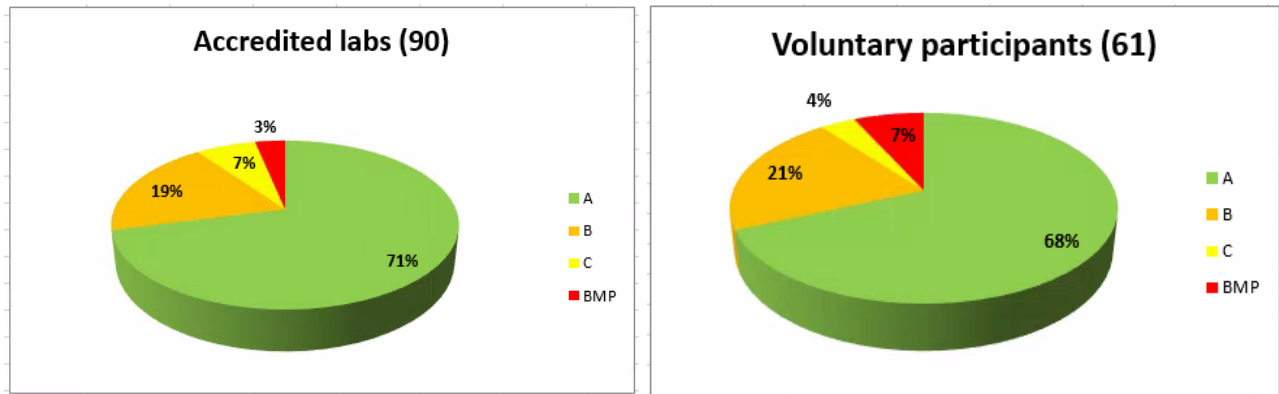
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GERMINATION Ratings

Total number of participants = 151



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	92	86	3.91	2.00	3.20
Abnormal seedlings	5	3	5	-	-	-
Non-germinated seed	13	5	9	-	-	-

Method used

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

Temperature °C	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
20<=>30	76	48	124
15<=>25	14	8	22
10<=>30*		1	1
20*		1	1



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25*	2	2
Not reported	1	1

* not in accordance with the ISTA Rules

Substrate	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
TP	87	54	141
PP	3	4	7
TPS*		1	1
Not reported		2	2

* not in accordance with the ISTA Rules

Pretreatment	# Users		# Users TOTAL
	Accredited labs	Voluntary participants	
No Treatment	24	28	52
Prechill	37	18	55
KNO₃	12	11	23
KNO₃ + Prechill	11	2	13
KNO₃ + Prechill + light	2		2
Light	4	1	5
Not reported		1	1



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Z-score Distribution

Proficiency Test Report – Test Round 20-3 F.pra

Species : *Festuca pratensis*

Scope: Germination

The following histograms show the frequency distributions of all participants Z-Scores for the relevant components, i.e. **Normal Seedlings** 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'

