

2010



Report of the Proficiency Test Committee

by **Günter Müller**



Proficiency Test Committee Members 2008-2010:

Chair: Günter Müller

Vice: Didier Demilly

Members:

- Caroline Cadget
- Sharon Davidson
- Ronald Don
- Timothy J. Gutormson
- Joanne Hinke
- Mari Jürman
- Jöel Lechappe
- Silvia Zanetti
- Rita Zecchinelli



Proficiency Test Committee Members 2011-2013:

Chair: Günter Müller

Vice: Didier Demilly

Members:

Sharon Davidson	Timothy J. Gutormson
Joanne Hinke	Mari Jürman
Jöel Lechappe	Silvia Zanetti
Rita Zecchinelli	Alison Powell
Zita Ripka	Hakon Tangeras
Takayuki Okuda	Benno Voit
Gisela Wustmann	Ruojing Wang
Sinikka Köylijärvi	



This report include:

- Results of the Proficiency Test Rounds 09-01 until 09-03.
- Just finished Proficiency Test Rounds and Test Rounds in preparation.
- Proficiency Test Programme Plan 2011-2013.



Proficiency Test Rounds 2009

Round	Species	Scope
09-1	<i>Hordeum vulgare</i>	P, OSD, G, TZ
09-2	<i>Linum usitatissimum</i>	P, OSD, G, M
09-3	<i>Oryza sativa</i>	P, OSD, G, OIC



Pre-Audit Proficiency Test Rounds 2009

Species	Test round score	Participants
<i>Zea mays</i>	G	6
<i>Sorghum bicolor</i>	P, OSD, G	4
<i>Hordeum vulgare</i>	P, OSD, G	14



Seed Health Proficiency Test Rounds 2009

Pathogene	Host	Participants
<i>Alternaria dauci</i> <i>Alternaria radicina</i>	<i>Daucus carota</i>	23



PT 09-1 *Hordeum vulgare*

- **Test leader:**
Caroline Cadger
- **Seed Testing Station :**
GBDL0400
- **Participants:**
123 labs
89 accredited
34 volunteers

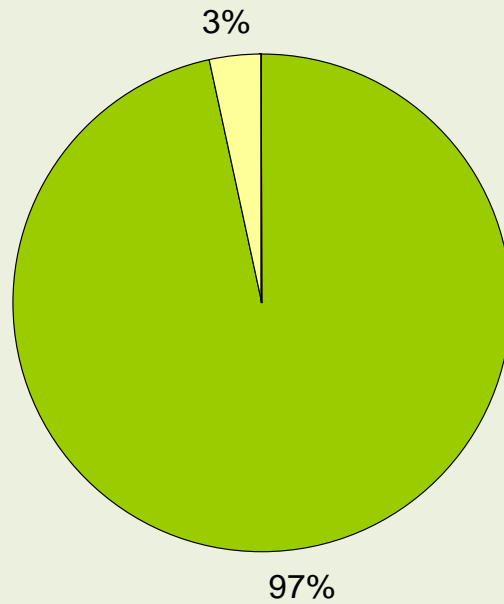


Proficiency Test Round 09-1

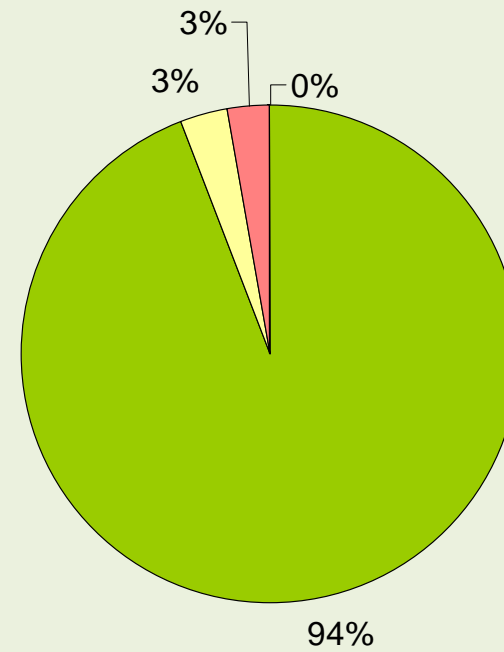
Hordeum vulgare

Purity

Accredited Labs



Voluntary Labs



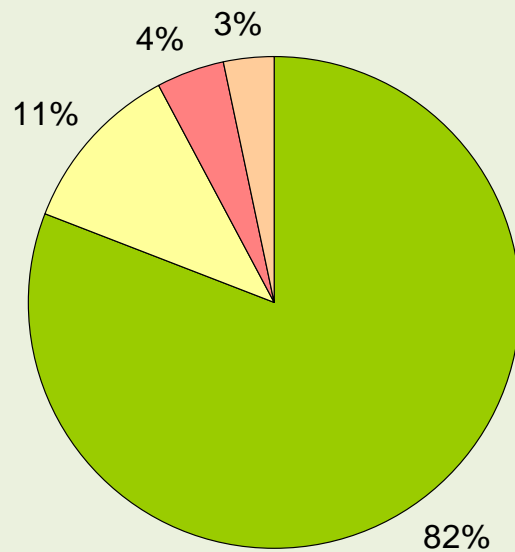


Proficiency Test Round 09-1

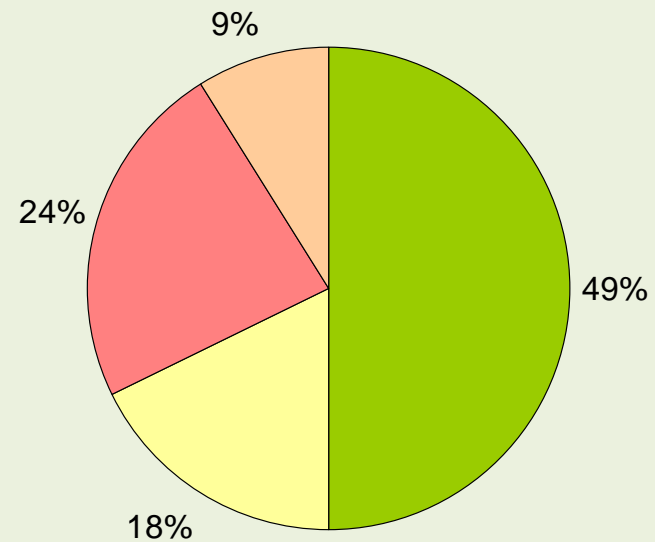
Hordeum vulgare

Germination

Accredited Labs



Voluntary Labs



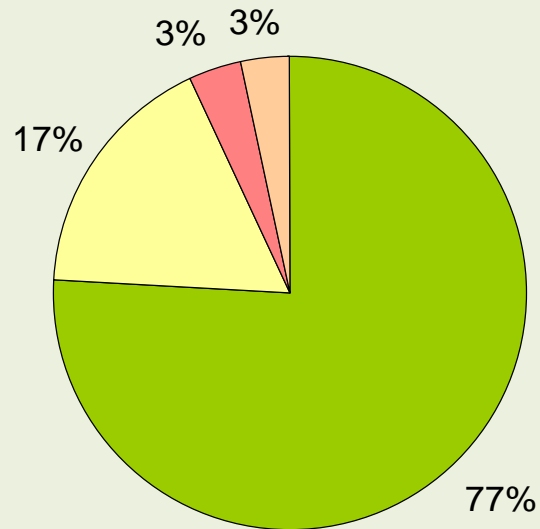


Proficiency Test Round 09-1

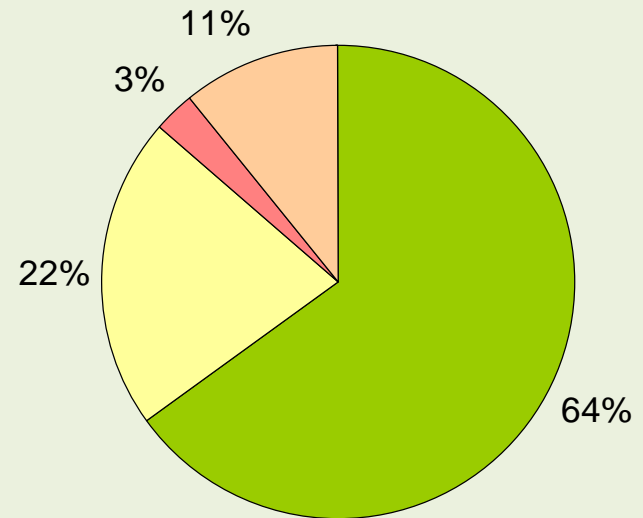
Hordeum vulgare

Viability

Accredited labs



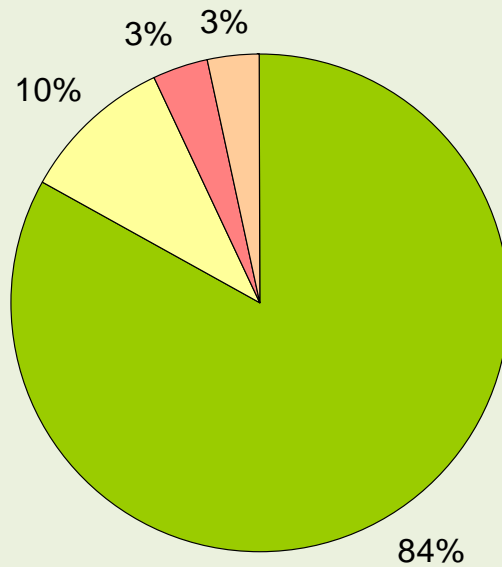
Voluntary labs



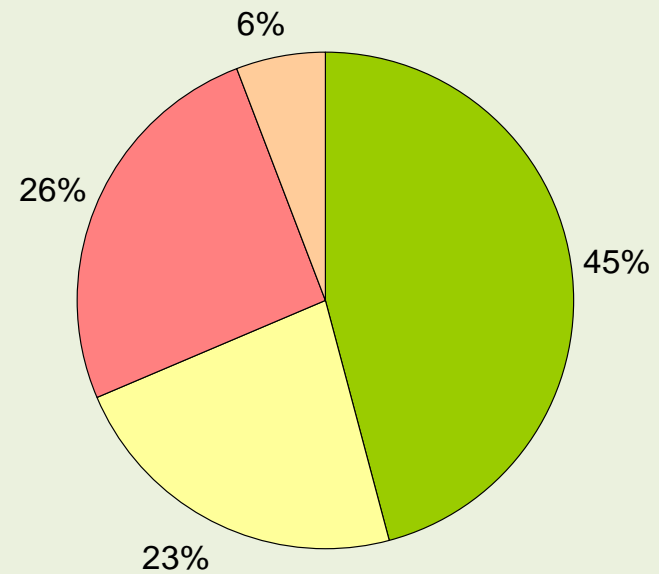


Proficiency Test Round 09-1 *Hordeum vulgare* OSD

Accredited Labs



Voluntary Labs





Retrieval rate 09-1 *Hordeum vulgare* lot 1

Species name	# Seeds added	Retrieval rate
<i>Fallopia convolvulus</i>	2	80.9
<i>Lolium sp.</i>	2	91.1
<i>Phleum sp.</i>	2	71.5
<i>Triticum aestivum</i>	3	96.2



Retrieval rate 09-1 *Hordeum vulgare* lot 2

Species name	# Seeds added	Retrival rate
<i>Avena sativa</i>	2	84.1
<i>Galium aparina</i>	3	94.6
<i>Lapsana communis</i>	2	86.2



Retrieval rate 09-1 *Hordeum vulgare* lot 3

Species name	# Seeds added	Retrival rate
<i>Agrostemma githago</i>	3	94.0
<i>Brassica sp.</i>	3	85.4
<i>Bromus sterilis</i>	2	93.5
<i>Elytrigia repens</i>	2	74.6



09-1 *Hodeum vulgare*, Mean Value and Standard Deviation Pure Seed

Sample	Pure Seed	
	Mean	SD
1	99.28	0.17
2	99.25	0.17
3	98.98	0.20

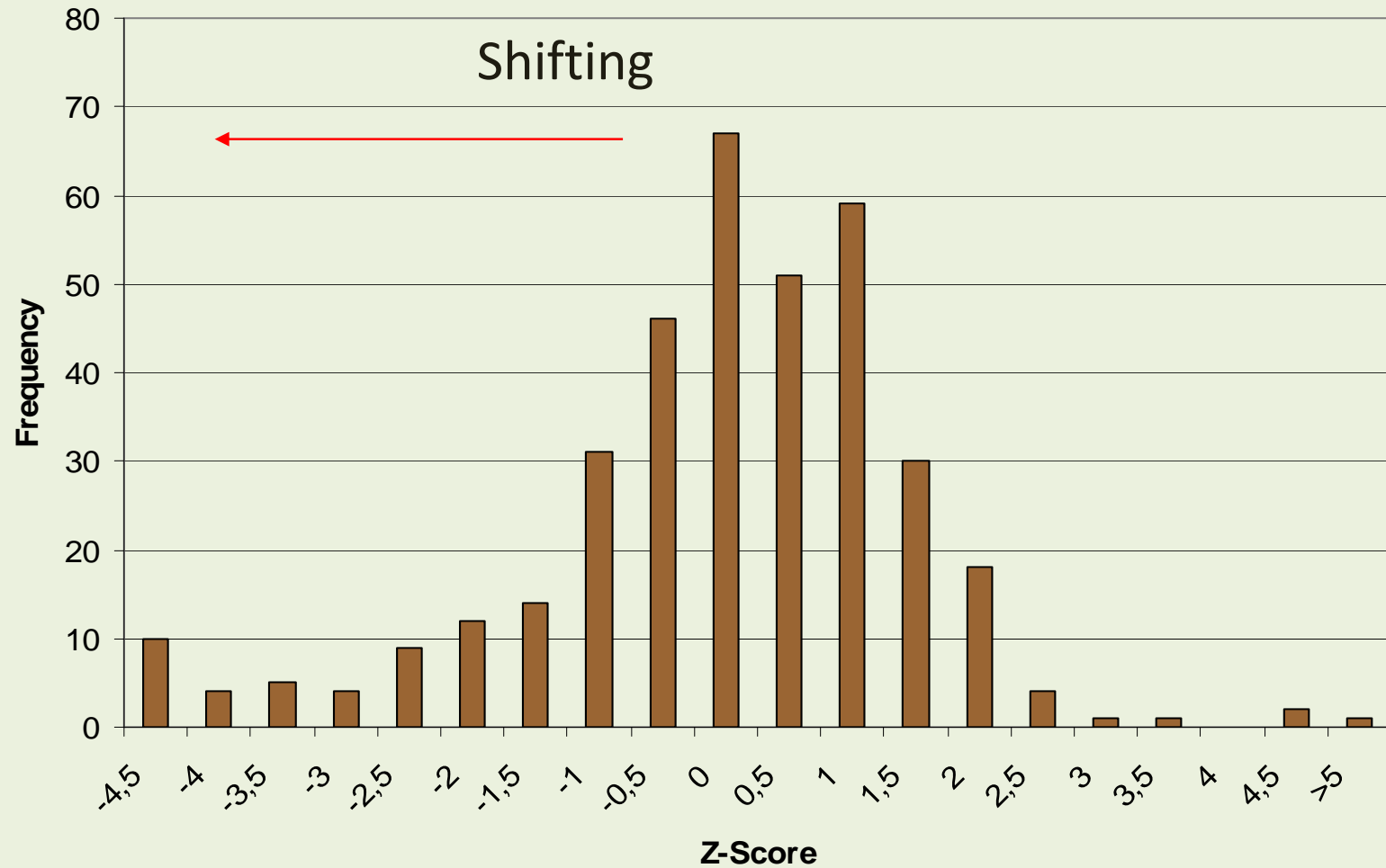


09-1 *Hodeum vulgare*, Mean Value and Standard Deviation Normal Seedlings and Viable Seeds

Sample	Normal Seedlings		Viable Seeds	
	Mean	SD	Mean	SD
1	94.35	1.49	93.87	1.68
2	86.54	2.07	88.61	3.19
3	95.55	1.35	91.97	1.98

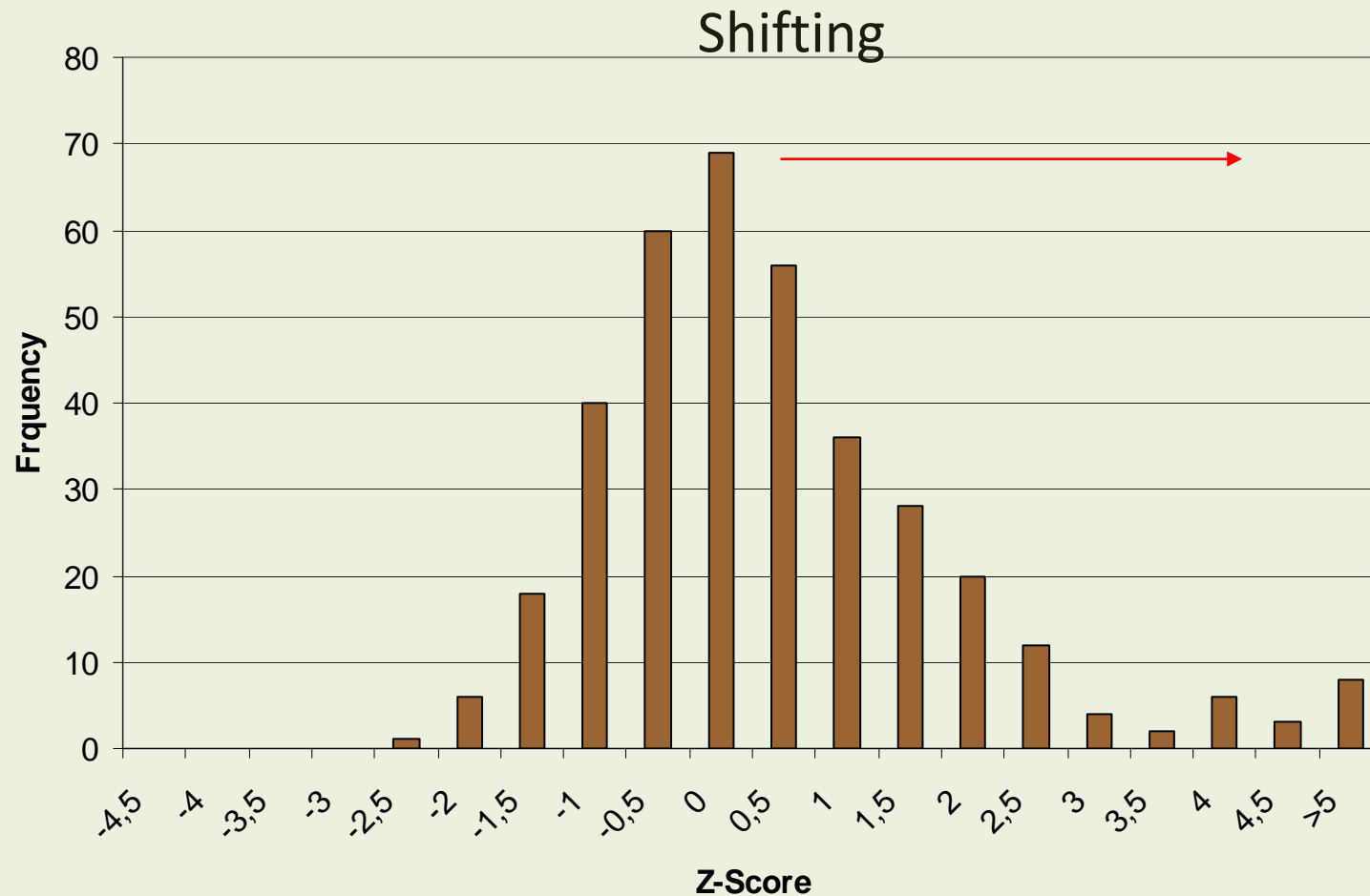


Hordeum vulgare, Scope Germination, Normal Seedlings





Hordeum vulgare, Scope Germination, Abnormal Seedlings





PT 09-2 *Linum usitatissimum*



- **Test leader:**
Ruoqing Wang
- **Seed Testing Station:**
CADL0800
- **Participants:**
123 labs
91 accredited
32 volunteers

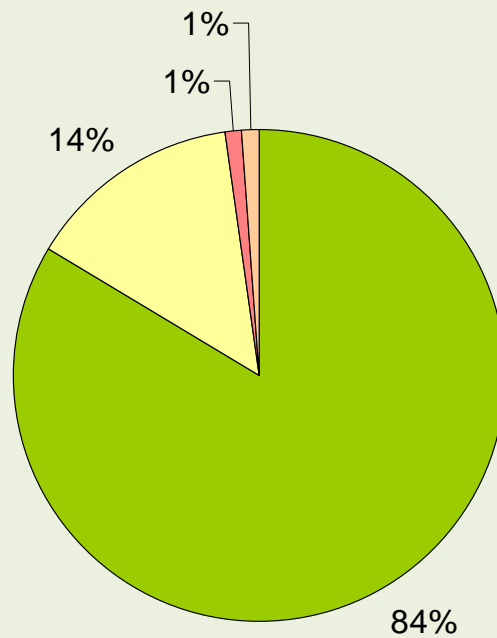


Proficiency Test Round 09-2

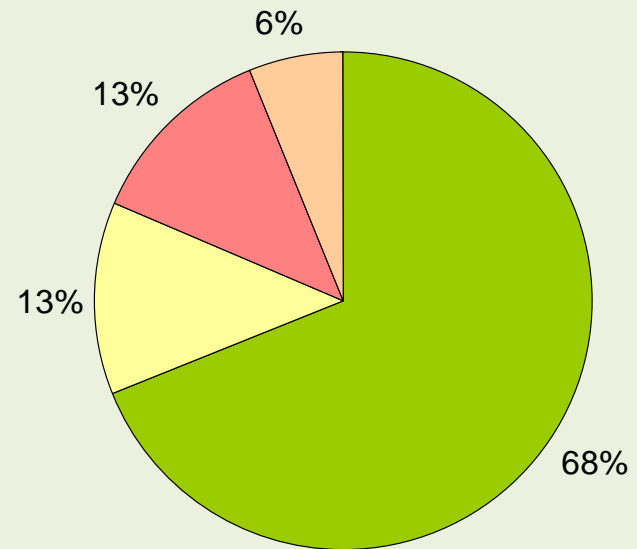
Linum usitatissimum

Purity

Accredited Labs



Voluntary Labs



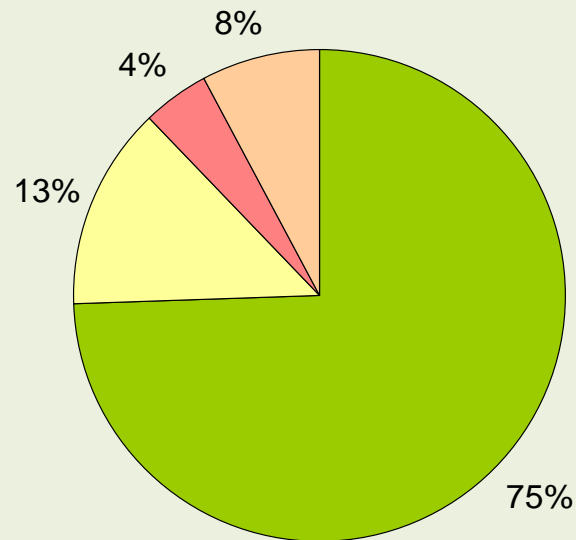


Proficiency Test Round 09-2

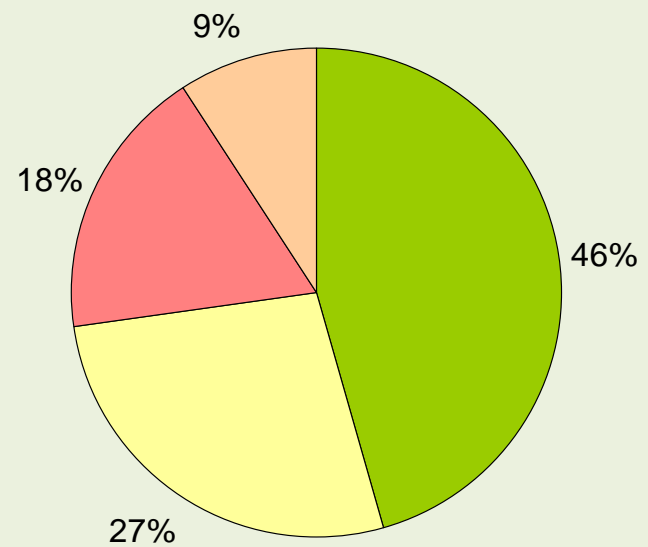
Linum usitatissimum

Germination

Accredited Labs



Voluntary Labs



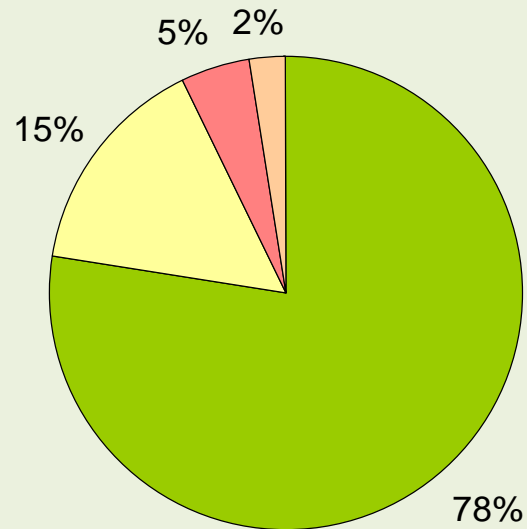


Proficiency Test Round 09-2

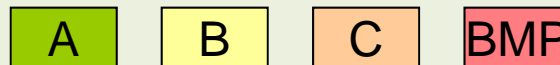
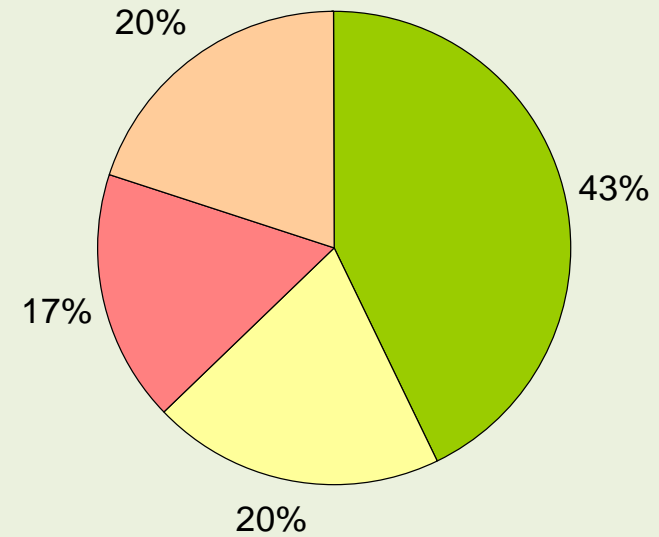
Linum usitatissimum

Moisture determination

Accredited Labs



Voluntary Labs



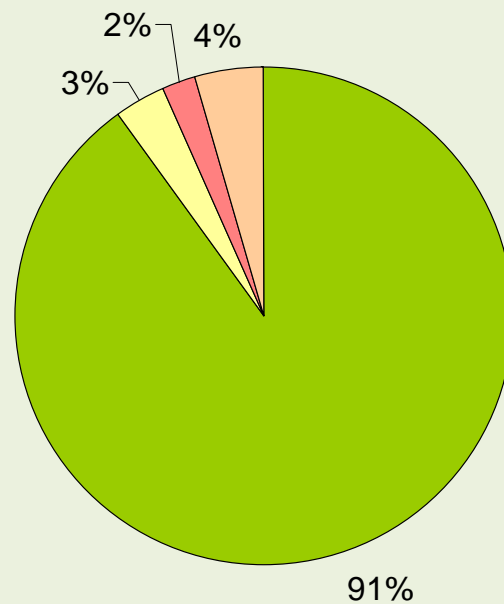


Proficiency Test Round 09-2

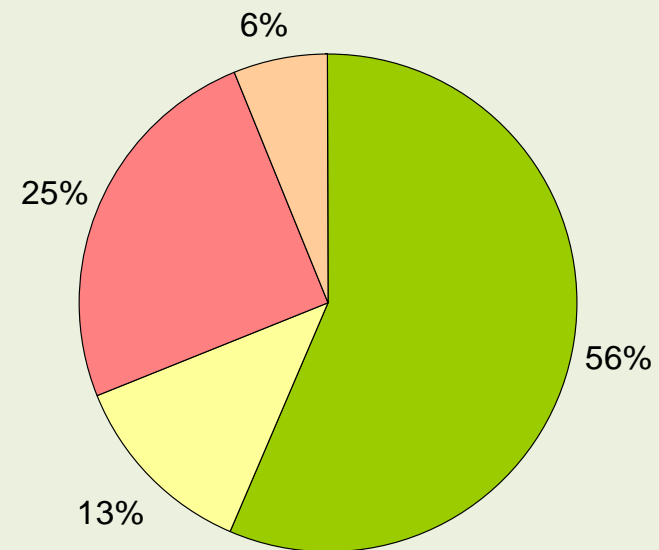
Linum usitatissimum

OSD

Accredited Labs



Voluntary Labs





Retrieval rate 09-2 *Linum usitatissimum* lot 1

Species name	# Seeds added	Retrival rate
<i>Cirsium arvense</i>	3	94.0
<i>Dracocephalum parviflorum</i>	5	91.7
<i>Galeopsis tetrahit</i>	4	92.3
<i>Lotus corniculatus</i>	4	88.8



Retrieval rate 09-2 *Linum usitatissimum* lot 2

Species name	# Seeds added	Retrival rate
<i>Chenopodium album</i>	5	93.5
<i>Fallopia convolvulus</i>	2	85.0
<i>Persicaria maculosa</i>	4	82.3
<i>Sonchus arvensis</i>	3	92.4
<i>Thlaspi arvense</i>	2	96.3



Retrieval rate 09-2 *Linum usitatissimum* lot 3

Species name	# Seeds added	Retrival rate
<i>Galium spurium</i>	2	94.7
<i>Rumex acetosella</i>	3	93.5
<i>Setaria viridis</i>	2	94.7
<i>Sinapis arvensis</i>	3	71.0
<i>Kochia scoparia</i>	4	67.9

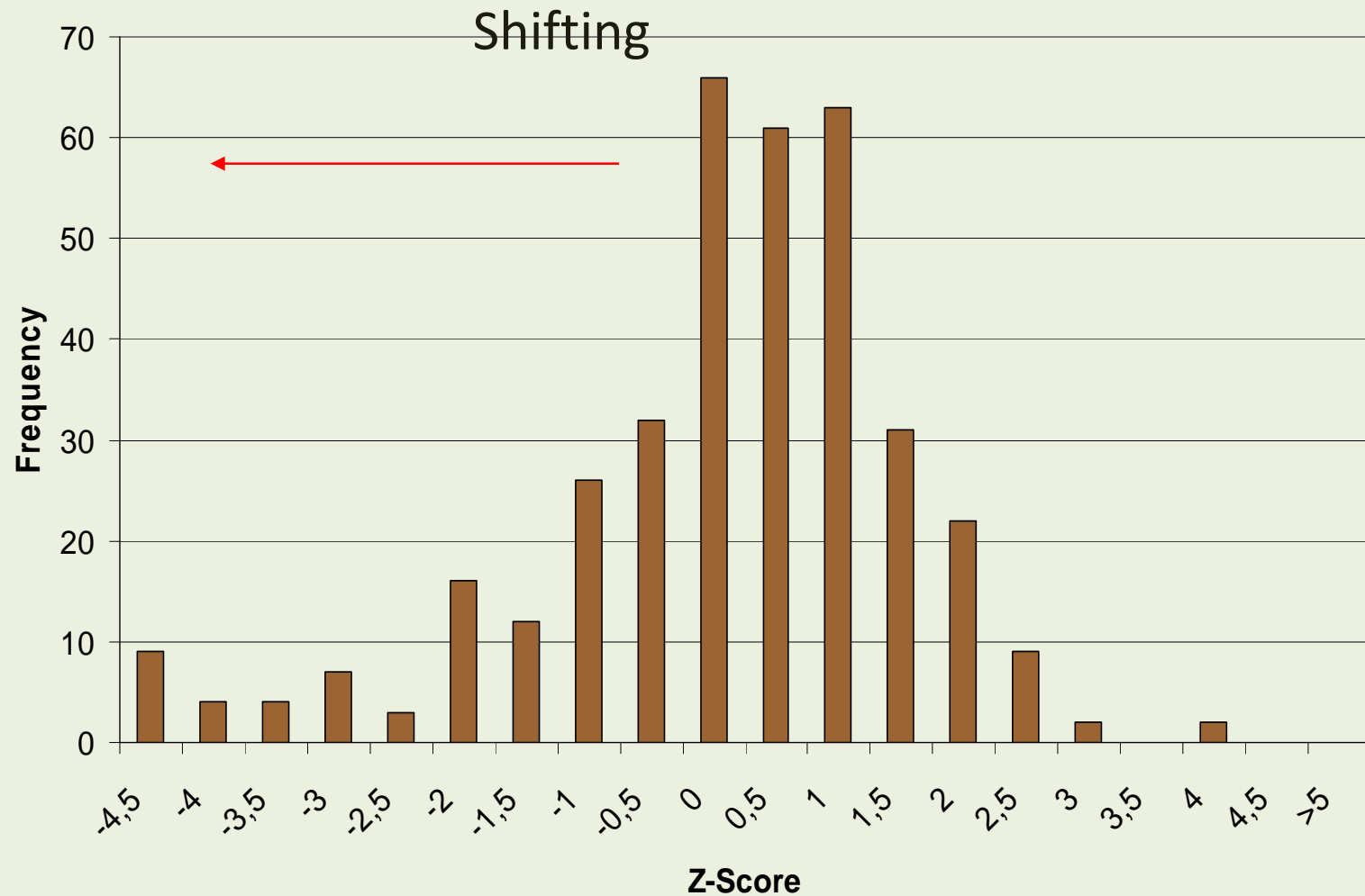


09-2 *Linum usitatissimum*, Mean Value and Standard Deviation

Sample	Pure Seed		Normal Seedlings	
	Mean	SD	Mean	SD
1	99.03	0.20	93.80	2.14
2	98.92	0.21	85.57	2.73
3	98.94	0.21	83.44	3.46

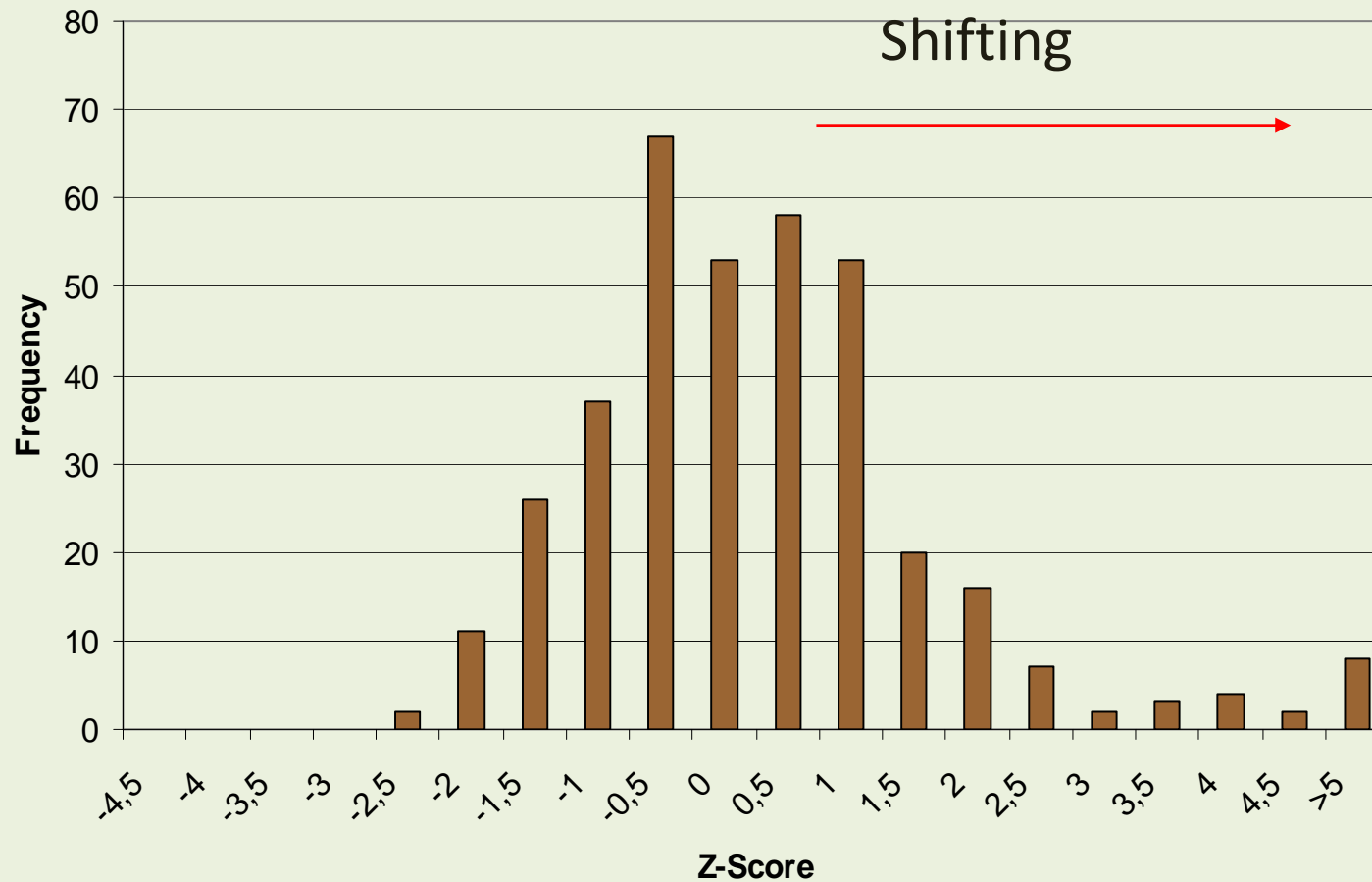


Linum usitatissimum, Scope Germination, Normal Seedlings





Linum usitatissimum, Scope Germination, Abnormal Seedlings





PT 09-3 *Oryza sativa*



- **Test leader:**
Rita Zecchinelli
- **Seed Testing Station :**
ITDL0300
- **Participants:**
129 labs
 93 accredited
 36 volunteers

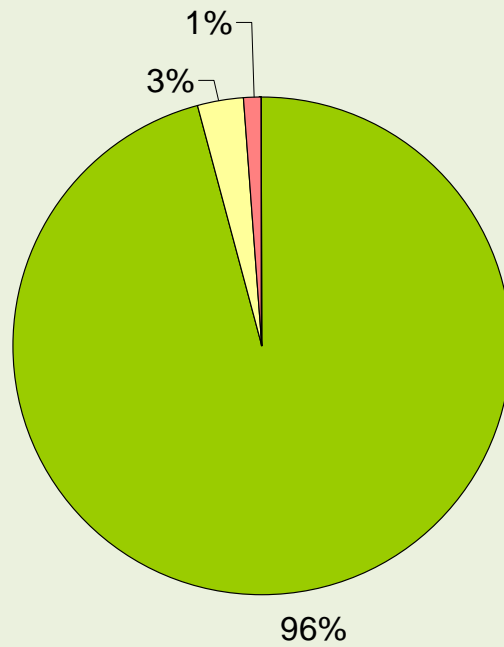


Proficiency Test Round 09-3

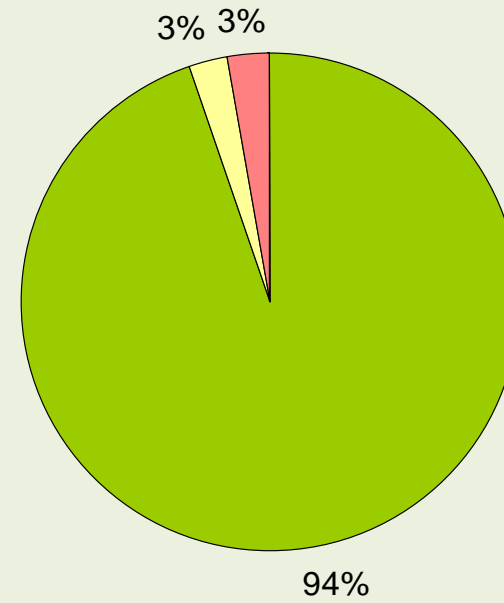
Oryza sativa

Purity

Accredited Labs



Voluntary Labs



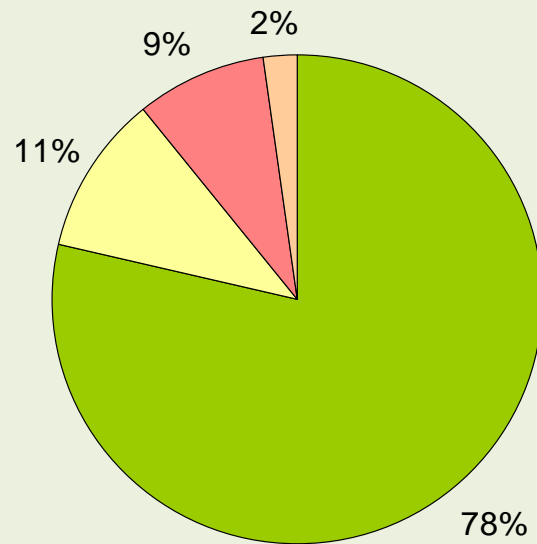


Proficiency Test Round 09-3

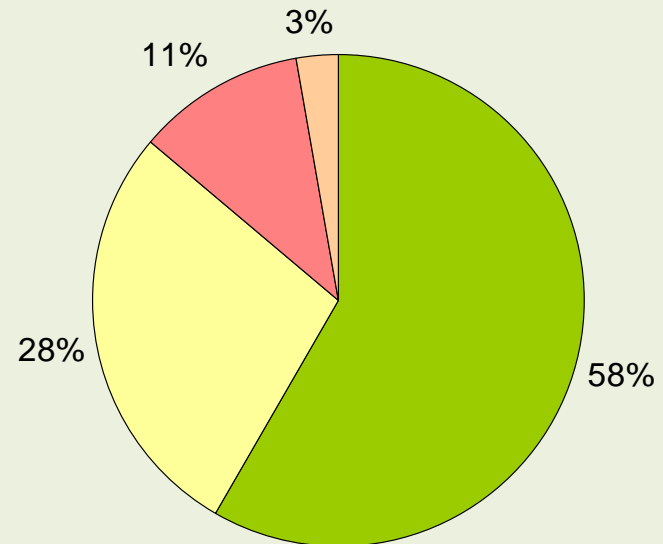
Oryza sativa

Germination

Accredited Labs



Voluntary Labs



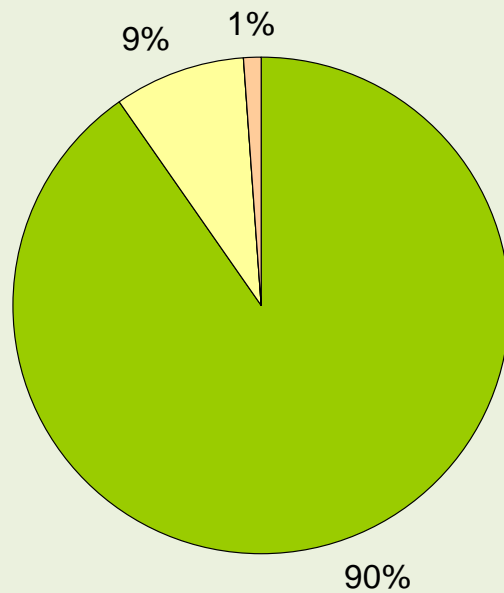


Proficiency Test Round 09-3

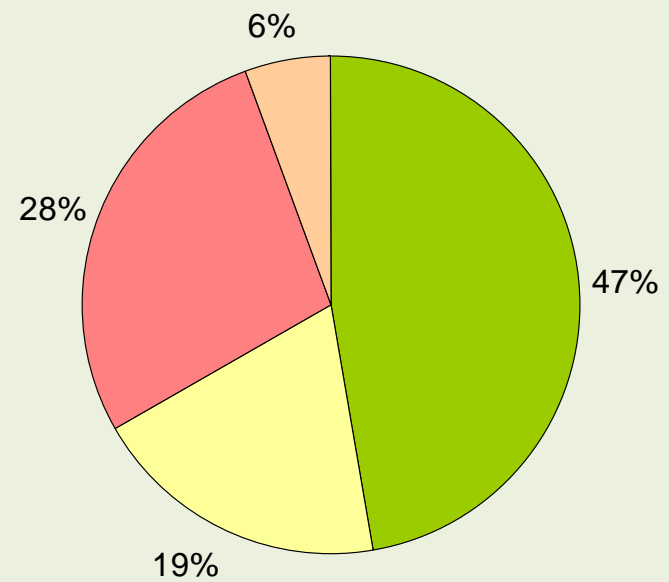
Oryza sativa

OSD

Accredited Labs



Voluntary Labs





Retrieval rate 09-3 *Oryza sativa* lot 1

Species name	# Seeds added	Retrival rate
<i>Avena sativa</i>	4	87.5
<i>Bromus catharticus</i>	2	82.3
<i>Linum usitatissimum</i>	3	97.7
<i>Rapistrum rugosum</i>	2	86.5



Retrieval rate 09-3 *Oryza sativa* lot 2

Species name	# Seeds added	Retrival rate
<i>Echinochloa crus-galli</i>	3	95.6
<i>Festuca arundinacea</i>	4	84.0
<i>Lotus corniculatus</i>	3	83.6
<i>Secale cereale</i>	4	92.9



Retrieval rate 09-3 *Oryza sativa* lot 3

Species name	# Seeds added	Retrival rate
<i>Allium cepa</i>	4	96.4
<i>Fallopia convolvulus</i>	2	88.1
<i>Hedysarum coronarium</i>	2	72.7
<i>Hordeum vulgare</i>	3	95.6

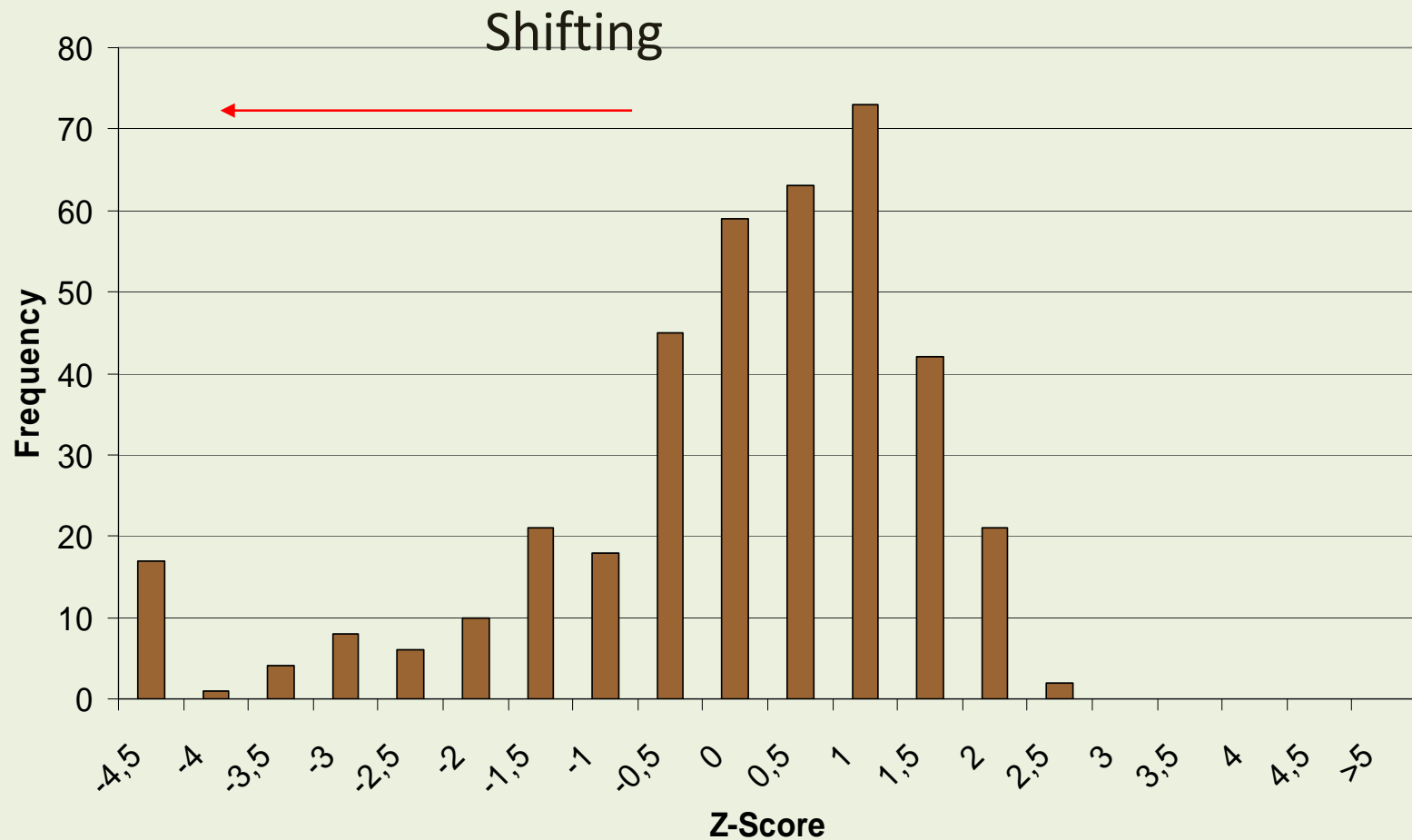


09-3 *Oryza sativa*, Mean Value and Standard Deviation

Sample	Pure Seed		Normal Seedlings	
	Mean	SD	Mean	SD
1	98.66	0.23	92.57	1.57
2	98.94	0.20	89.73	2.53
3	99.28	0.17	90.80	3.31

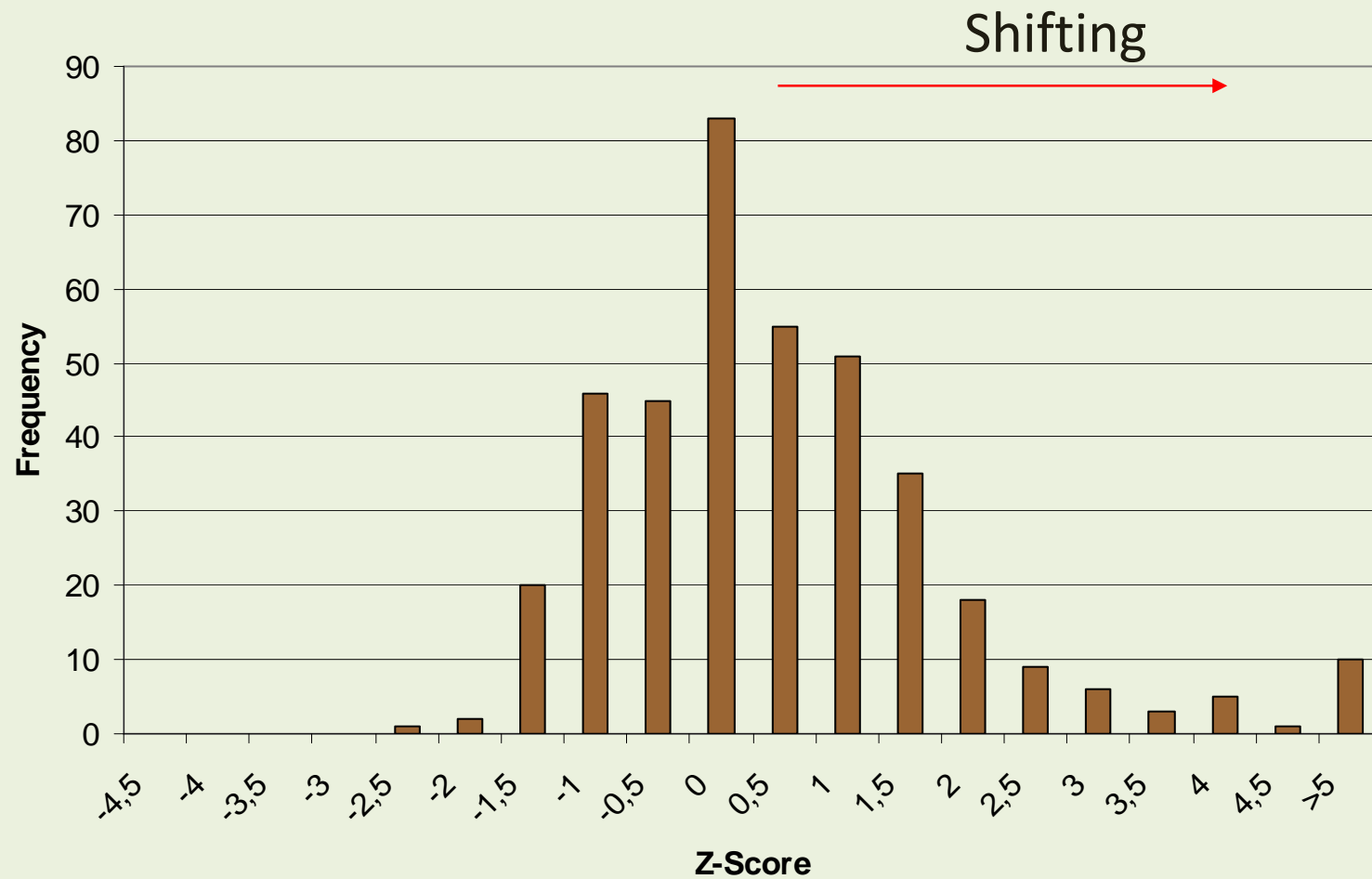


Oryza sativa, Scope Germination, Normal Seedlings





Oryza sativa, Scope Germination, Abnormal Seedlings





Conclusions for accredited labs:

The participants achieved respectable results in purity testing. The quality in this kind of seed testing is high and below minimum performance ratings are seldom found.

➤ In germination testing the results depend on the experience of the seed analysts. Normal seedlings are classified as abnormal occasionally. This is likely the reason for some poor PT performance.

➤ A visible improvement in performance can be found in other seed determination since the beginning of rating. Most participants are in the position to retrieve and to identify foreign seeds in an acceptable way.



Proficiency Test Rounds 2010

Round	Species	Scope
10-1	<i>Festuca arundinacea</i>	P, OSD, G
10-2	<i>Medicago lupulina</i>	P, OSD, G, TZ, OIC
10-3	<i>Vicia faba</i>	G, M



Pre-Audit Proficiency Test Rounds 2010

Species	Test round score	Participants
<i>Sinapis alba</i>	P, OSD, G, M	16
<i>Hordeum vulgare</i>	P, OSD, G, M	16



Seed Health Proficiency Test Rounds 2010

Pathogene	Host	Participants
<i>Drechslera oryzae</i> <i>Pyricularia oryzae</i> <i>Alternaria</i> <i>padwickii</i>	<i>Oryza sativa</i>	11



PT 10-1 *Festuca arundinacea*



Test leader:

Sharon Davidson

Seed Testing Station :

USML0500

Participants:

labs 130

87 accredited

43 volunteers



PT-Leaders and organized PT Rounds since 2003

Didier Demilly	Ronnie Don	Pamela Strauss
Rita Zecchinelli	Patricia Brownsfield	Mari Jürmann
Günter Müller	Jette Nydam	Zita Ripka
Sharon Davidson	Ken Allison	Ruojing Wang
Timothy J. Gutormson	Caroline Cadger	Silvia Zanetti

5PT

4PT

2PT

1PT



My thanks go to all Proficiency Test Leaders for doing an excellent job in the past three years and to the staff of the ISTA Accreditation Department for the pleasant co-operation!



Proficiency test Programme Plan 2011

PT	Species	Methods	PT Leader
11-1	<i>Helianthus annuus</i>	P, G, OSD	Didier Demilly
	<i>Lathyrus odoratus</i>	G	Zita Ripka
11-2	<i>Triticum aestivum</i>	P, G, OSD, TZ, M, OIC	Håkon Tangerås
11-3	<i>Trifolium pratense</i>	P, G, OSD	Takayki Okuda



Proficiency test Programme Plan 2012

PT	Species	Methods	PT Leader
12-1	<i>Sorghum bicolor</i>	P, G, OSD, TZ	Benno Voit
12-2	<i>Phleum pratense</i>	P, G, OSD, M	Gisela Wustmann
	<i>Pisum sativum</i>	Vigour	Alison Powell
12-3	<i>Lactuca sativa</i>	P, G, OSD, OIC	Rita Zecchinelli



Proficiency test Programme Plan 2013

PT	Species	Methods	PT Leader
13-1	<i>Phalaris arundinacea</i>	P, G, OSD, OIC	Ruojing Wang
13-2	<i>Pisum sativum</i>	G	Sinikka Köylijärivi
13-3	<i>Brassica napus</i>	P, G, OSD, TZ, M	Mari Jürmann, Günter Müller

29th ISTA
Congress Cologne

2010



Thank you