

2007-2008 Proficiency Testing Results

I. Samples

- Kentucky bluegrass, *Poa pratensis* purity & germination
- Garden bean, *Phaseolus vulgaris* germination only

II. Kentucky bluegrass, *Poa pratensis*

A. Sample preparation

- Bulk seed divided down and blown
- Contaminants added at the SCST office
- 10 randomly selected samples sent for homogeneity testing
- Samples sent to all RST members and other members and analysts who requested them

B. Statistical Analysis- Germination, Kentucky bluegrass, *Poa pratensis*

- Results within 1 STDEV of the mean: 78 out of 97 or 80%
- Results within 2 STDEV of the mean: 92 of 97 or 93%

Statistical Evaluation	% Normal	% Abnormal	% Dead	% Dormant
MEAN	75.72	3.67	19.57	1.01
STDEV	8.22	2.53	8.78	3.68
STDEV *2	16.44	3.67	19.57	1.01
1 STDEV Above	83.95	6.21	28.35	4.69
1 STDEV Below	67.51	1,14	10.79	-2.67
2 STDEV Above	92.16	8.74	37.13	8.38
1 STDEV Below	59.29	-1.39	2.02	-6.36

C. Statistical Analysis- Purity, Kentucky bluegrass, *Poa pratensis*

- Results within 1 STDEV of the mean: 82 out of 101 or 81%
- Results within 2 STDEV of the mean: 96 out of 101 or 95%
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Statistical Evaluation	Pure Seed	Inert Matter	Crop Seed	Weed Seed
MEAN	91.92	7.56	0.09	0.42
STDEV	1.06	1.00	0.15	0.24
STDEV *2	2.12	2.00	0.31	0.47
1 STDEV Above	92.98	8.56	0.25	0.66
1 STDEV Below	90.87	6.56	-0.06	0.19
2 STDEV Above	94.04	9.56	0.40	0.90
1 STDEV Below	89.81	5.56	-0.21	-0.05

C. Contaminants

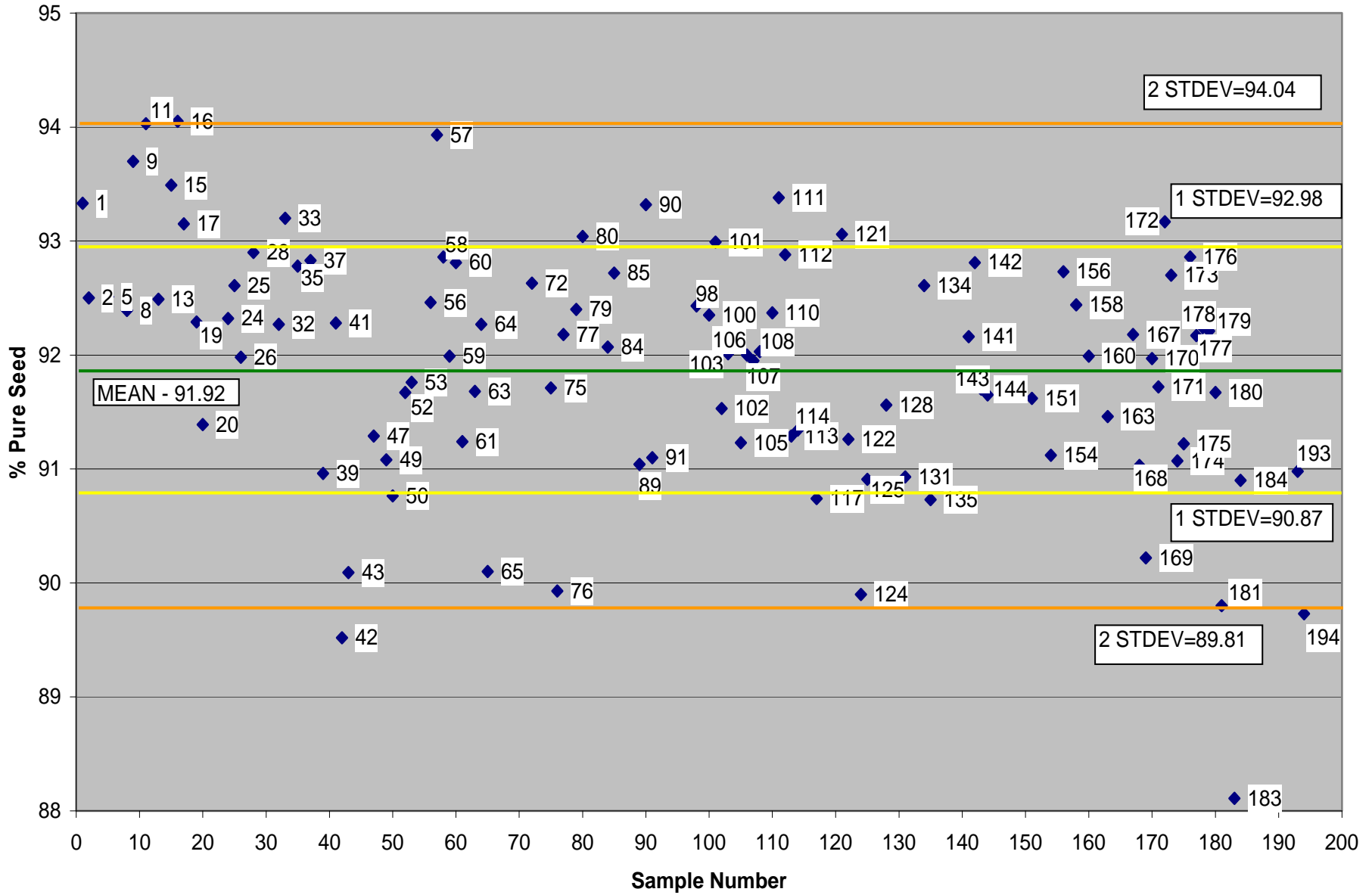
- 4 *Poa annua*, Annual bluegrass
- 3 *Taraxacum officinale*, Dandelion
- 1 *Cirsium arvense*, Canada thistle
- 2 *Alopecurus geniculatus*, Foxtail, water
- 4 *Puccinella nuttalliana*, Nuttall's alkaligrass

D. Retrieval of Contaminants

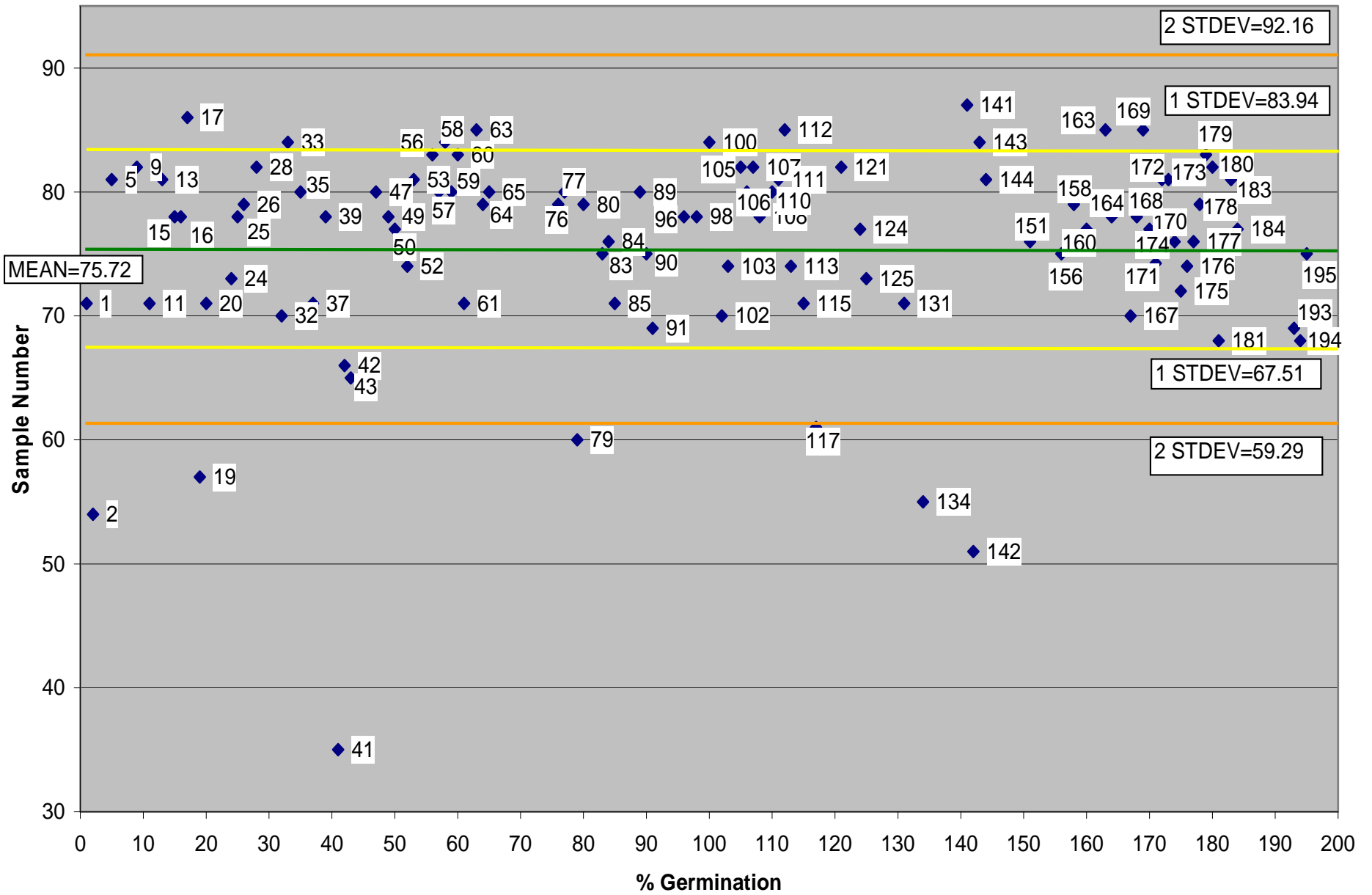
- *Alopecurus geniculatus* (added to blown or light portion) - 59% identified correctly, 41% did not find the contaminant.
- *Puccinella nuttalliana* - 0% identified the contaminant correctly.
 - 18% identified the contaminant as *Puccinella sp.*
 - The contaminant was frequently misidentified as *P. distans*.
- *Cirsium arvense*- 97% correctly identified the contaminant.
- *Taraxacum officinale*- 96% correctly identified the contaminant.
- *Poa annua*- 78% correctly identified the contaminant.

Statistical Evaluation	<i>P. annua</i> Annual bluegrass	<i>T. officinale</i> Dandelion	<i>C. arvense</i> Canada thistle	<i>A. geniculatus</i> Water foxtail
MEAN	2.85	2.85	0.99	1.30
STDEV	2.03	0.64	0.17	1.13
STDEV *2	4.06	1.28	0.34	2.16
1 STDEV Above	4.88	3.49	1.16	2.43
1 STDEV Below	0.82	2.21	0.82	0.17
2 STDEV Above	4.88	3.49	1.33	3.46
1 STDEV Below	0.82	1.57	0.65	-.86

Kentucky Bluegrass % Pure Seed



Kentucky bluegrass % Germination



III. Garden bean, *Phaseolus vulgaris*

A. Sample preparation

- Bulk seed divided down
- 10 randomly selected samples sent for homogeneity testing
- Samples sent to all RST members and other members and analysts who requested them

B. Statistical Analysis- Germination

- Results within 1 STDEV of the mean: 84 out of 121 or 84%
- Results within 2 STDEV of the mean: 95 out of 121 or 95%

Statistical Evaluation	% Normal	% Abnormal	% Dead	% Hard
MEAN	67.24	16.07	4.23	12.18
STDEV	14.68	9.65	5.99	10.36
STDEV *2	29.36	19.29	11.99	20.73
1 STDEV Above	81.92	25.72	10.23	22.54
1 STDEV Below	52.56	6.43	-1.76	1.81
2 STDEV Above	96.60	35.37	16.22	32.90
1 STDEV Below	37.87	-3.22	-7.75	-8.55

C. Statistical Analysis- Normal seedlings + Hard Seed

- Results within 1 STDEV of the mean: 100 out of 121 or 83%
- Results within 2 STDEV of the mean: 115 out of 121 or 95%
- Wide variation in hard seed noted in results.

Statistical Evaluation	% Normal + Hard Seed
MEAN	79.41
STDEV	10.64
STDEV *2	21.29
1 STDEV Above	90.05
1 STDEV Below	68.77
2 STDEV Above	100.70
1 STDEV Below	58.12

% Bean Germination- Normal Seedlings

