

## Appendix 5. 2016 Proposal 5 Supporting Evidence

Table 6. Replicates of 100 seeds as PSU for ELMA7

Part 1. Replicates 1 - 8

ELMA7	sample 1	seed per g	sample 2	seed per g	sample 3	seed per g	sample 4	seed per g
Rep 1	0.3117	321	0.3472	288	0.3186	314	0.3109	322
Rep 2	0.3190	313	0.3361	298	0.3224	310	0.3144	318
Rep 3	0.3252	308	0.3276	305	0.3281	305	0.3185	314
Rep 4	0.3365	297	0.3401	294	0.3385	295	0.3355	298
Rep 5	0.3202	312	0.3243	308	0.3461	289	0.3363	297
Rep 6	0.3175	315	0.3451	290	0.3264	306	0.3426	292
Rep 7	0.3106	322	0.3281	305	0.3512	285	0.3528	283
Rep 8	0.3152	317	0.3423	292	0.3229	310	0.3841	260
Mean weight	0.3194875		0.33635		0.331775		0.336888	
Purity weight	8		8		8		8	
Noxious weed weight	80		84		83		84	
Mean seed per gram	313		297		301		297	
Mean seed per ounce	8873		8429		8545		8415	
Variance	0.0000693		0.0000762		0.0001443		0.0005766	
Standard deviation	0.0083218		0.0087312		0.0120142		0.0240127	
Coefficient of variance	2.6047402		2.5958748		3.6212034		7.1278101	
Status (Pass or Fail)	Pass		Pass		Pass		Failed	

[1 OZ = 28.3495 G]

Part 2. Replicates 9 - 16

ELMA7	sample 1	seed per g	Sample 2	seed per g	sample 3	seed per g	sample 4	seed per g
Rep 9							0.2913	
Rep 10							0.2937	
Rep 11							0.3025	
Rep 12							0.3125	
Rep 13							0.3231	
Rep 14							0.3255	
Rep 15							0.3381	
Rep 16							0.3483	
Mean weight							0.316875	
Purity weight							7.92	
Noxious weed weight							79.21	
Mean seed per gram							316	
Mean seed per ounce							8947	
Variance							0.000424	
Standard Deviation							0.020592	
Coefficient of variance							6.498354	
							Fail	

[1 OZ = 28.3495 G]

Table 7. Replicates of 100 seeds as PSU for ELWA2

Part 1. Replicates 1 - 8

ELWA2	sample 1	seed per g	sample 2	seed per g	sample 3	seed per g	sample 4	seed per g	sample 5	seed per g	sample 6	seed per g
Rep 1	0.3002	333	0.2843	352	0.3439	291	0.3273	306	0.4156	241	0.3316	302
Rep 2	0.2846	351	0.2721	368	0.3283	305	0.3238	309	0.4307	232	0.3568	280
Rep 3	0.2685	372	0.2647	378	0.3435	291	0.3281	305	0.4085	245	0.3865	259
Rep 4	0.2828	354	0.2616	382	0.3518	284	0.3506	285	0.4334	231	0.3680	272
Rep 5	0.2937	340	0.2601	384	0.3491	286	0.3452	290	0.4407	227	0.3494	286
Rep 6	0.2955	338	0.2761	362	0.3412	293	0.3202	312	0.4326	231	0.3507	285
Rep 7	0.2823	354	0.2690	372	0.3569	280	0.3312	302	0.4399	227	0.3390	295
Rep 8	0.3017	331	0.2796	358	0.3308	302	0.3360	298	0.4098	244	0.3952	253
Mean weight	0.2886		0.2709		0.3432		0.3328		0.4264		0.3597	
Purity weight	7		7		9		8		11		9	
Noxious weed weight	72		68		86		83		107		90	
Mean seed per gram	346		369		291		300		235		278	
Mean seed per ounce	9821		10463		8261		8518		6649		7883	
Variance	0.000125		0.000076		0.00010		0.000111		0.00017		0.0005	
Standard deviation	0.0112		0.0086		0.00983		0.01053		0.01312		0.0222	
Coefficient of variance	3.8689		3.2083		2.8652		3.1627		3.0774		6.1826	
Status (Pass or Fail)	Pass		Pass		Pass		Pass		Pass		Fail	

[1 OZ = 28.3495 G]

Part 2. Replicates 9 - 16

ELWA2	sample 1	seed per g	sample 2	seed per g	sample 3	seed per g	sample 4	seed per g	sample 5	seed per g	sample 6	seed per g
Rep 9											0.3601	
Rep 10											0.3454	
Rep 11											0.3856	
Rep 12											0.3646	
Rep 13											0.3754	
Rep 14											0.3833	
Rep 15											0.3674	
Rep 16											0.3757	
Mean weight	0		0		0		0				0.36969	
Purity weight											9	
Noxious weed weight											92	
Mean seed per gram											270	
Mean seed per ounce											7669	
Variance											0.00017	
Standard deviation											0.0132	
Coefficient of variance											3.57136	
Status (Pass or Fail)											Pass	

[1 OZ = 28.3495 G]

**Photograph of plants, seeds and seed heads (Figures a – k)**

*Elymus macrourus* (ELMA7, Tufted Wheatgrass)

Plant photos



(a)



(b)

Seed photo



(c)



(d)

Seed head photo



(e)

*Elymus wawawaiensis* (ELWA2, Snake River Wheatgrass)

Plant photos



(f)



(g)

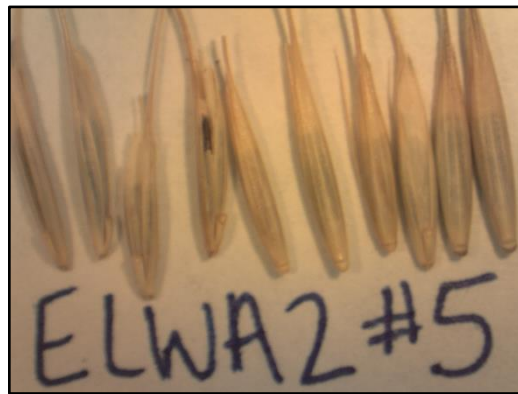
Seed photo



(h)



ELWA2#5

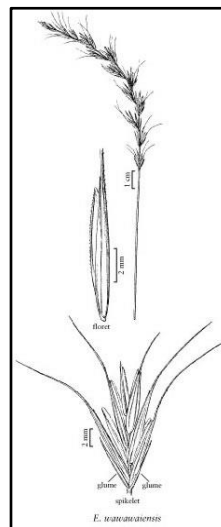


(i)

Seed head photo



(j)



(k)

## Figures:

(a) Moore, Paula. 2014. [Photo] *Elymus macrourus*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(b) Moore, Paula. 2014. [Photo] *Elymus macrourus*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(c) Moore, Paula. 2015 [Photo] *Elymus macrourus*, Sample 4, sfd-11-11pmc148, Regenerated at Palmer Material Center, Alaska.

(d) Moore, Paula. 2015 [Photo] *Elymus macrourus*, Sample 4, sfd-11-11pmc148, Regenerated at Palmer Material Center, Alaska.

(e) Moore, Paula. 2014. [Photo] *Elymus macrourus*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(f) Moore, Paula. 2014. [Photo] *Elymus wawawaiensis*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(g) Moore, Paula. 2014. [Photo] *Elymus wawawaiensis*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(h) Stevenson Intermountain Seed, Inc. 2015. [Photo] *Elymus wawawaiensis*, Ephraim, Utah 84627. <http://stevensonintermountainseed.com/devsiseed/?product=elymus-wawawaiensis> (accessed 26 September 2015).

(i) Moore, Paula. 2015 [Photo] *Elymus wawawaiensis*, Sample 5, PI 506266, Regenerated at Central Ferry, Washington.

(j) Moore, Paula. 2014. [Photo] *Elymus wawawaiensis*, USDA-ARS, Agriculture Experiment Station of 13 Western States, Washington State University, Central Ferry, Washington.

(k) Roché, Cindy. 2006. [Drawing] *Elymus wawawaiensis*, Utah State University. [http://www.usu.edu/weeds/plant\\_species/nativespecies/snakeriver.html](http://www.usu.edu/weeds/plant_species/nativespecies/snakeriver.html) (accessed 26 September 2015).