

Project Title: Timothy Turfgrass Trial

Project Leader: Louise Strang

Objective: Stand persistence of 6 timothy (*Phleum pratense*)  
germplasm lines.

#### Results:

The seed was collected in August, 2004, from a nursery containing 359 different germplasm accessions. Five of these accessions plus a bulk sample of common timothy seed were seeded at 3.6 lbs/a in 100 ft<sup>2</sup> plots arranged in a split block design with cultivars as whole plots (randomized within reps) and mowing treatments stripped across whole plots. Mowing treatments included: 1) Turf at 4" height, mow to 3" (S); 2) Turf reaches 6" ht., mow to 4" (M); 3) Turf at 8", mow to 4" (T). Each set of treatments was replicated 3 times.

Growth rates (inches/day) were computed for each cultivar and mowing treatment over each 30-day period from May 1, 2007 to Aug. 22 (cessation of growth). In the first month there were significant differences among cultivars ('I11' was the slowest at 0.58"/day) and mowing treatment (M was slowest averaging 0.66"/d). During the remaining months there were no significant differences among cultivars, but the M mowing regime still maintained the slowest growth rate.

The cultivars with the least accumulated growth for the season (<30") were 'E1', 'A18', 'H11', and 'I11'. The M mowing treatment (at 6" trim to 4") produced 35% less topgrowth than the average of the S and T treatments.

#### Summary:

Growth rate differences among germplasm lines were evident during the early growing period (when growth rates were highest). Throughout the season the M (at 6" mow to 4") was more effective at maintaining slow turf growth than the more intensive S or the least intensive T treatments.

#### Future Plans:

The trial will be continued to determine the breeding lines and mowing regime best suited for timothy turfgrass production.

Timothy Turfgrass Trial

Kalispell, 2007

Growth Rates

<u>Entry</u>	<u>Accession</u>	<u>First Month</u>				<u>Second Month</u>			
		<i>short</i>	<i>medium</i>	<i>tall</i>	<i>mean</i>	<i>short</i>	<i>medium</i>	<i>tall</i>	<i>mean</i>
A11	PI 205305	0.85	0.81	0.71	0.79	0.18	0.14	0.18	0.17
A14	PI 206717	0.78	0.67	0.73	0.73	0.11	0.14	0.21	0.15
A15	PI 342577	0.79	0.71	0.78	0.76	0.15	0.05	0.27	0.16
A18	PI 251846	0.85	0.75	0.81	0.80	0.15	0.11	0.12	0.13
D1	PI 262471	0.58	0.55	0.73	<b>0.62</b>	0.17	0.10	0.22	0.16
E1	PI 206909	0.76	0.61	0.71	0.69	0.10	0.16	0.11	0.12
E15	PI 305271	0.78	0.67	0.72	0.72	0.12	0.10	0.12	0.12
F3	PI 311081	0.72	0.67	0.72	0.70	0.10	0.07	0.14	0.10
F12	PI 325461	0.78	0.74	0.73	0.75	0.11	0.07	0.10	0.09
F13	PI 231770	0.65	0.61	0.69	<b>0.65</b>	0.21	0.06	0.17	0.15
H11	PI 419597	0.67	0.59	0.71	<b>0.66</b>	0.19	0.11	0.05	0.12
I11	PI 419625	0.59	0.55	0.61	<b>0.58</b>	0.10	0.10	0.36	0.19
S18	PI 618776	0.75	0.65	0.71	0.70	0.06	0.07	0.29	0.14
T1	PI 618777	0.69	0.60	0.70	<b>0.66</b>	0.11	0.17	0.19	0.16
T3	PI 618779	0.82	0.65	0.73	0.74	0.10	0.20	0.18	0.16
T14	PI 619448	0.72	0.58	0.74	0.68	0.12	0.15	0.22	0.16
bulk	Check	0.82	0.74	0.73	0.76	0.14	0.05	0.22	0.14
	mean	0.74	<b>0.66</b>	0.72		<b>0.13</b>	<b>0.11</b>	0.19	
	VxH		Var	Ht		VxH	Var	Ht	
	LSD(0.05)	NS	<b>0.10</b>	<b>0.04</b>		NS	NS	0.036	
	Pr>F	0.9934	0.0010	0.0003		0.1281	0.7920	0.0001	
	CV(%mean)	15.2				63.9			

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Timothy Turf Grass Trials, continued

Kalispell 2007

Growth Rates

<u>Entry</u>	<u>Third Month</u>				<u>Fourth Month</u>				<u>AccumGrowth(in)</u>			
	<i>short</i>	<i>medium</i>	<i>tall</i>	<i>mean</i>	<i>short</i>	<i>medium</i>	<i>tall</i>	<i>mean</i>	<i>short</i>	<i>medium</i>	<i>tall</i>	<i>mean</i>
A11	0.17	0.12	0.21	0.16	0.01	0.01	0.22	0.08	35.90	26.57	38.33	33.60
A14	0.23	0.10	0.22	0.18	0.03	0.01	0.15	0.06	34.67	22.67	38.33	<b>31.89</b>
A15	0.25	0.15	0.25	0.21	0.02	0.00	0.13	0.05	36.53	22.67	41.77	33.66
A18	0.24	0.12	0.19	0.18	0.00	0.06	0.22	0.09	37.43	25.63	39.10	34.06
D1	0.20	0.14	0.21	0.18	0.01	0.01	0.13	0.05	28.90	20.23	37.90	<b>29.01</b>
E1	0.23	0.13	0.20	0.19	0.01	0.00	0.19	0.07	33.47	22.57	35.23	<b>30.42</b>
E15	0.22	0.21	0.31	0.25	0.01	0.01	0.22	0.08	34.43	25.30	40.33	33.36
F3	0.23	0.12	0.23	0.19	0.00	0.04	0.20	0.08	32.00	22.43	37.57	<b>30.67</b>
F12	0.20	0.16	0.19	0.18	0.00	0.01	0.17	0.06	32.90	24.77	34.90	<b>30.86</b>
F13	0.15	0.11	0.24	0.16	0.00	0.00	0.12	0.04	30.00	19.20	34.90	<b>28.03</b>
H11	0.17	0.15	0.25	0.19	0.03	0.01	0.13	0.06	31.33	22.13	33.87	<b>29.11</b>
I11	0.31	0.11	0.26	0.23	0.00	0.07	0.05	0.04	30.57	20.67	37.90	<b>29.71</b>
S18	0.30	0.22	0.24	0.25	0.00	0.01	0.16	0.06	33.90	24.77	41.23	33.30
T1	0.24	0.14	0.23	0.20	0.00	0.03	0.19	0.07	31.67	23.57	38.13	<b>31.12</b>
T3	0.29	0.12	0.20	0.20	0.04	0.06	0.21	0.10	38.00	25.77	38.47	34.08
T14	0.28	0.12	0.18	0.19	0.01	0.04	0.08	0.04	34.67	22.20	36.10	<b>30.99</b>
bulk	0.22	0.16	0.26	0.21	0.01	0.01	0.18	0.07	36.13	24.47	40.77	33.79
mean	0.23	<b>0.14</b>	0.23		<b>0.01</b>	<b>0.02</b>	0.16		33.68	<b>23.27</b>	37.93	
	VxH	Var	Ht		VxH	Var	Ht		VxH	Var	Ht	
LSD(0.05)	NS	NS	0.03		NS	NS	0.02		NS	4.02	1.69	
									0.997			
Pr>F	0.9178	0.4064	<.0001		0.2036	0.3290	<.0001		9	0.0244	<.0001	
CV(%mean)	37.4				78.0							