

# Duo Festulolium



Duo festulolium is the result of a cross between the best meadow fescue and best tetraploid perennial ryegrass material available. It is a tetraploid. It looks like ryegrass, is digestible like ryegrass, and is palatable like ryegrass. However, it is normally more productive than ryegrass, and has greater winter hardiness. As a result of its meadow fescue parentage Duo can tolerate the heat of summer and the frigid cold of winter better than ryegrass. It is also generally more persistent than most ryegrasses.



Duo has been evaluated extensively in yield trials across the upper Midwest and into the northeast. Results of several University yield trials from Wisconsin to New York comparing Duo with several ryegrasses are summarized in tables 1 thru 4. In all trials Duo yielded equal to or superior to all other varieties included in the trials, and in the Wooster, Ohio study (Table 2) it proved to be the best in terms of winter injury and stand persistence.

For both palatability and feed value Duo has excelled. In the Penn State grazing study for example (Table 3) Duo was at the top in terms of forage consumed. In other studies Duo has consistently ranked with the best when considering high digestibility, high forage intake, and animal performance.



Duo can be used for pasture, silage, hay or green chop. It can be grown alone, in mixture with a legume, or even with other ryegrasses. When mixed with alfalfa or red clover the result is a high quality forage for hay or silage. When combined with ladino clover, and perhaps a tetraploid ryegrass, you have a great combination for a high yielding, high quality, season long grazing program.

**Preferred Seed ..... Preferred Results**

**Table 1**

University of Wisconsin – Hay Trial  
Lancaster Agriculture Research Station, Lancaster, Wisconsin  
Yield in ton/acre 2002

Species	Variety	30-May	2-Jul	16-Aug	24-Sept	Year Total	2001 Year Total	2000 Year Total	3-Year Total
Festulolium	Duo	2.25	1.35	1.31	0.89	5.58	4.54	4.53	14.93
Perennial	Elgon	1.56	1.6	1.26	1.05	5.22	3.92	3.98	13.12
Perennial	Herbie	1.37	1.42	1.26	1.09	5.04	4.36	3.67	13.07
Perennial	Mongita	2.33	1.29	1.18	1.15	5.81	3.77	3.43	13.01

**Table 2**

Ohio State Ryegrass Hay Trials  
Wooster, OH – Sown April 7, 1999

Variety	Winter injury * 12-Apr-01	% Stand 23-May-01	DM yield (lb/acre) 13-Jun-01
Duo	2.4	88.6	2754
Amazon	4.1	65.4	1942
Barfort	4.1	64.9	1797
Aubisque	3.3	70.7	1691
GrandDaddy	3.5	66.0	1459
Elgon	3.5	72.6	1406
Respect	3.8	77.5	1385
BG34 Blend	3.7	66.4	1377
Polly II	4.6	11.3	565
Bestfor	4.7	6.6	475
Bestfor II	4.9	10.0	277
BG16 Blend	4.9	1.6	0
Mean	3.8	44.9	1463
LSD (0.05)	0.5	16.0	591
Winter injury * 1= no injury with good vigor, 2=moderate injury, 3=severe injury with stand loss, 4= very severe injury and significant stand loss, 5= dead (>95% dead)  Complete results at <a href="http://www.ag.ohiostate.edu/~perf/forage00/index.html">http://www.ag.ohiostate.edu/~perf/forage00/index.html</a>			

**Preferred Seed ..... Preferred Results**

Duo, alone or in mixture, can be seeded in spring or in early to mid August on a firm, well prepared seedbed, frost seeded, or no-tilled into an existing grass sod. On a prepared seedbed, it is essential that the seedbed be firm, and seed should be placed not more than ¼ to ½ inch deep. Band seeding is an excellent method of seeding, but other seeding methods can be used. Cultipacking after seeding is also beneficial. For no-till seedings the existing sod, or other vegetation should be suppressed chemically or by close mowing or grazing. Suggested seeding rates are given in Table 5.

For highest quality hay or silage, if grown alone, Duo should be harvested at the boot stage. Disc or drum mowers rather than sickle bar mowers are preferred. If grown in mixture with a legume, the legume should determine when the crop is harvested. For pasture a rotational system of grazing is best when grazing is started when the plants are approximately 10 to 12 inches tall, and animals removed when grazed down to 3 to 4 inches.

**Table 3**

Penn State University Grazing Study  
State College, PA – Sown Aug, 2001

Forage Consumed (lb/acre)				
Variety	2002 Yield	2003 Yield	2004 Yield	3-Year Total
Duo	5762	5489	5534	16,785
Mara Plus	4488	5203	5513	15,204
Tonga	4784	4949	4849	14,582
GrandDaddy	4979	5044	4523	14,543
Barleone	3191	4696	5149	13,036
<i>Complete results at <a href="http://cropsoil.psu.edu/pdf/2004foragetrials.pdf">http://cropsoil.psu.edu/pdf/2004foragetrials.pdf</a></i>				

As with other forage species and mixtures, lime and fertilizer applied prior to seeding should be based on soil test. The same for fertilizing established stands. For Duo grown alone, no legume, additional Nitrogen is beneficial. Based on a Michigan State University grass fertilizer study including Duo, a total of 150 lbs. of actual Nitrogen per year in at least 3 split applications appeared optimum.



**Preferred Seed ..... Preferred Results**

As with many other newer improved grasses, research suggests that Duo can be an important part of a forage program in the northeast, especially for pasture. However, it should not be the only grass species in the program. Never the less, it deserves serious consideration as a possible forage grass for your operation.

Untreated seed of Duo is available for Northeast Organic Producers.

**Table 4**

Cornell University, Ithaca, NY  
Perennial Ryegrass – Festulolium Trial  
Sown May 6, 2002

Variety	2004 Total Season	2003 Total Season	2 Year Total	Heading date
Duo (festulolium)	5.07	6.76	11.82	27-May
Spring Green (festulolium)	4.22	6.82	11.04	27-May
Garbaldi	4.40	6.42	10.83	3-Jun
Bastion	4.25	6.00	10.25	23-May
Citadel	4.36	5.79	10.14	27-May
Quartet	3.34	5.68	9.03	7-Jun
BAR Lp 9132	3.22	4.88	8.09	12-Jun
Trial Mean	4.12	6.05		
LSD (0.05)	0.55	0.47		
CV (%)	9.2	5.3		
Complete results at <a href="http://plbrgen.cals.cornell.edu/programsandprojects/departmental/foragetest/grasses04.htm">http://plbrgen.cals.cornell.edu/programsandprojects/departmental/foragetest/grasses04.htm</a>				

**Table 5**

Suggested seeding rates for Duo alone and in mixture with a single legume	
<u>Species</u>	<u>lbs / acre</u>
Duo alone	30-35
Duo when mixed with any of the following:	10-12
Alfalfa	8-10
Red Clover	6-8
Ladino Clover	2-4

**Preferred Seed ..... Preferred Results**