

GRASS SEED VARIETY YIELD TRIALS FOR NORTHEASTERN OREGON

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Grass seed acreage in the Lower Umatilla and Columbia Basin regions of northeastern Oregon and south central Washington has steadily increased since the early 1990s. Climate, soils, and production practices, including the use of overhead irrigation, differ considerably from other production regions in Oregon. Because of differences in grass seed growing conditions from the more traditional production regions, performance of grass seed cultivars were evaluated under Lower Umatilla Basin growing conditions.

Cooperative research trials were originally initiated in 1997 at the Hermiston Agricultural Research and Extension Center to determine grass seed cultivar yield potential of fine fescues, Kentucky bluegrass, tall fescue and perennial ryegrass under Lower Umatilla Basin growing conditions. Results of these trials were previously reported (Singh et al. 2000). This report summarizes results of a second series of trials initiated in 1998. Trials were established under center pivot irrigation in fall 1998. Thirteen fine fescue (FF) varieties, nine Kentucky bluegrass (KBG) varieties, thirteen tall fescue (TF) varieties, and twelve perennial ryegrass (PRG) varieties were seeded in separate studies. Each varietal entry was seeded at 5 lb/a with a plot drill at 12-inch row spacing. The studies were arranged in a randomized complete block design, with four replications, and each plot was 6 x 25 feet (actual crop area 4 x 25 feet). Data presented in this report are the clean seed yields from second (1999-00) crop year of the grass seed variety trials. Data from the 1998-99 crop year is not presented because grass seed yields were adversely affected by a severe hailstorm during harvest. During the 1999-00 cropping season the study areas were treated with the pesticides listed in Table 1.

Fine fescue varieties were swathed with a plot swather at approximately 35-40 percent seed moisture (Table 2) and were harvested with a plot combine on July 11, 2000. Clean seed yield data from the fine fescue variety seed yield trial are presented in Table 2. Kentucky bluegrass at approximately 28 percent seed moisture (Table 3) and harvested with a plot combine on July 14, 2000. Clean seed yields from the Kentucky bluegrass varieties seed yield trial are presented in Table 3. Tall fescue varieties were swathed with a plot swather on June 22, 2000 at approximately 43 percent seed moisture and harvested with a plot combine on July 11, 2000. Clean seed tall fescue variety seed yield trial is presented in Table 4. Perennial ryegrass varieties, except Spring Green, were swathed with a plot swather at approximately 35 percent seed moisture. Spring Green (*Festulolium*) was harvested at 40 percent seed moisture. All perennial ryegrass varieties were harvested with a plot combine on July 14, 2000. Clean seed yields of perennial ryegrass varieties are presented in Table 5.

Table 3. Clean seed yield of Kentucky bluegrass varieties established September 12, 1998 at Hermiston, OR, 2000

Variety	Seed company	Swathing date	Seed yield (lb/a)
Gnome	Turf Merchants	June 10	1104
B2-42	Turf-Seed	June 14	1042
Viva	Turf Merchants	June 10	1015
Blue Star	Turf-Seed	June 10	1002
A96-328	Turf Merchants	June 10	967
A7-60	Turf-Seed	June 10	896
Cobalt	Turf Merchants	June 14	774
A7-245A	Turf-Seed	June 10	537
L.S.D. (0.05)			310

Table 4. Clean seed yield of tall fescue varieties established September 18, 2000 at Hermiston, OR, 2000

Variety	Seed company	Swathing date	Seed yield (lb/a)
5E5	Turf-Seed	June 22	3392
5R94E	Turf-Seed	June 22	3208
Wolfpack	Turf-Seed	June 22	2900
MB 211	Pennington	June 22	2879
Plantation	Pennington	June 22	2863
5DU	Turf-Seed	June 22	2789
Tar Heel	Turf-Seed	June 22	2763
Regiment	Advanta	June 22	2737
ISI TF 23	International	June 22	2664
AG-T981	Lesco	June 22	2421
Bravo	Lesco	June 22	2408
Rebel Sentry	Lofts	June 22	2309
AG-T982	Lesco	June 22	2169
L.S.D. (0.05)			510

Table 5. Clean seed yield of perennial ryegrass varieties established (September 18, 1998) at Hermiston, OR, 2000.

Variety	Seed company	Swathing date	Seed yield (lb/a)
Charger II	Turf-Seed	June 26	2222
ASP 400	Advanta	June 24	2208
BFP	Pennington	June 24	2136
R.2	International	June 24	2111
Prelude III	Lofts	June 24	2083
Manhattan 3	Turf-Seed	June 24	2029
Imagine	Olsen-Fennel	June 24	1940
Essence	International	June 26	1842
Catalina	Turf-Seed	June 24	1796
Sonata	Pennington	June 24	1792
Brightstar II	Turf-Seed	June 24	1586
Spring Green	Turf-Seed	June 24	1317
L.S.D. (0.05)			393

References

Singh, D., and Ball, D.A., and J.P. McMorran. 2000. Grass seed variety yield trials for northeastern Oregon. 1999 Seed Production Research Report, OSU Ext/CrS 114: 52-55.

Table 1. Pesticides applied in the four-grass seed crop variety yield studies

Date of application	Grass seed crop	Pesticide name	Rate
September 22, 1999	All	Goal 2XL + Lexone 75 DF	4 oz/a + 4 oz/a
November 12, 1999	All	Admire* + Siltek	3.3 oz/a + 8.6 oz/a
November 22, 1999	All	Quadris+ NIS	6 oz/a
Mar 24, 2000	All	Goal 1.6 EC + Bucril	2 oz/a + 1.5 pt/a
April 7, 2000	All	Tilt + Sulphur DF + Silwet	4 oz/a + 2 lbs/a + 10 oz/100 gal
May 1, 2000	KBG	Laredo + Sulphur DF + Silwet	8 oz/a + 2 lbs/a + 10 oz/100 gal

* Admire is not registered for use in grass seed crops. Only used for experimental purpose.

Table 2. Clean seed yield of fine fescue varieties established September 18, 1998 at Hermiston, OR, 2000.

Variety	Type	Company	Swathing date	Seed yield (lb/a)
Longfellow II	Chewings Fescue	International	June 22	2806
ISI F1 11	Hard Fescue	International	June 21	2794
8CHF	Chewings Fescue	Barenbrug	June 22	2647
8HF	Hard Fescue	Barenbrug	June 14	2552
ISI Frr 7	Strong Creeping Red Fescue	International	June 22	2499
4 RU	Hard Fescue	Turf-Seed	June 14	2489
ISI F1 12	Hard Fescue	International	June 14	2455
ISI Frr 6	Strong Creeping Red Fescue	International	June 22	2193
85 CHF	Strong Creeping Red Fescue	International	June 22	2105
ISI Frr 5	Strong Creeping Red Fescue	International	June 22	1843
Discovery	Hard Fescue	Turf – Seed	June 21	1839
8 CRF	Creeping Red Fescue	Barenbrug	June 22	1822
4 VB	Strong Creeping Red Fescue	Turf-Seed	June 22	1692
L.S.D. (0.05)				492