

Wear Tolerance of Kentucky Bluegrass and Perennial Ryegrass Cultivars

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Traffic/wear tolerance cultivar evaluation trials were conducted by Pure-Seed Testing, Inc. at Hubbard, OR and Rolesville, NC



OR wear trials used the Cady Traffic Simulator



NC wear trials used the Rutgers Wear Simulator



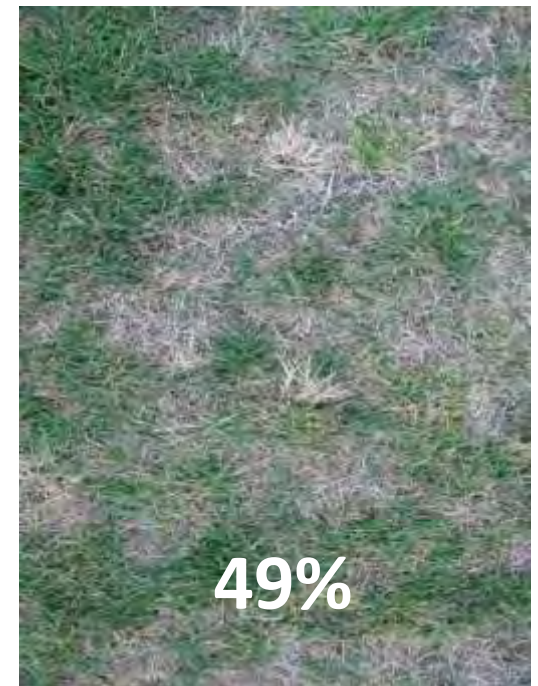
Traffic/wear treatments were applied over time to turf evaluation trials:

- * Perennial ryegrass (OR)
- * Kentucky bluegrass (OR, NC)
- * KB & PR mixtures (OR)

Trials were evaluated using digital image analysis



Images analyzed to determine % green cover after traffic



OR perennial ryegrass traffic trial



Mean percent green cover* ratings for entries in a perennial ryegrass turf trial seeded fall of 2008 near Hubbard, OR and subjected to traffic treatments using a Cady Traffic Simulator.

Entry	24 Nov 09	18 Nov 10	24 Aug 11
Defender	54.5 ¹	54.9 ²	53.7 ³
Silver Dollar	47.3	64.3	49.6
Showtime	46.5	49.1	46.6
Transformer	51.5	64.0	44.1
Gray Goose	43.8	66.9	43.4
Gray Fox	40.4	60.1	41.4
Citation Fore	44.9	58.0	38.8
Uno	58.3	62.0	37.5
Manhattan 5 GLR	45.7	69.8	36.2
Inspire	42.4	71.1	30.2
LSD (0.05)	18.2	17.8	18.8
CV (%)	23.8	16.9	25.7

*evaluated using digital image analysis; highlighted means are in top statistical group

¹66 games simulated traffic applied

²54 games simulated traffic applied during spring and 42 games applied in fall

³54 games simulated traffic applied

Mean percent green cover* ratings for entries in perennial ryegrass turf trials seeded near Hubbard, OR and subjected to traffic treatments using a Cady Traffic Simulator.

Entry	2008 Trial 19 Aug 2010	2011 Trial 12 Oct 2012
Gray Fox	92.2 ¹	82.3 ²
Dominator	78.1	81.3
Silver Dollar	77.8	79.4
Pennant III	77.6	78.2
Manhattan 5 GLR	82.3	78.0
Carly	80.7	75.8
Charger II	69.5	75.8
Uno	85.1	72.7
Palmer V	68.1	70.7
Manhattan 6	82.4	70.2
Brightstar SLT	68.3	64.9
Citation Fore	75.1	64.0
Quickstart II	58.0	59.5
Zoom	84.3	57.9
1G Squared	71.5	48.4
Sauvignon	76.7	35.6
LSD (0.05)	23.7	23.6
CV (%)	19.7	21.8

*evaluated using digital image analysis; highlighted means are in top statistical group

¹36 games simulated traffic applied between 30 July and 9 Sep

²30 games simulated traffic applied between 15 Sep and 9 Oct

Kentucky bluegrass trials



Mean traffic damage* ratings for entries in Kentucky bluegrass turf trials seeded fall of 2010 near Rolesville, NC and Hubbard, OR and subjected to traffic treatments.

Entry	NC 2012 18 June	OR 2013 19 June
Prosperity	86.3 ¹	91.7 ²
Jump Start	87.6	91.5
Kenblue	73.6	90.4
Midnight II	84.2	88.2
Abbey	78.0	87.3
Avalanche	82.2	84.6
Right	78.9	82.6
Hampton	80.0	82.5
Midnight	75.9	74.9
Moonlight SLT	68.3	73.9
Thermal Blue	79.5	71.9
Juliet	83.4	71.6
Unique II	66.5	70.2
Lunar	59.7	55.8
LSD (0.05)	10.6	15.1
CV (%)	8.5	11.6

*evaluated using digital image analysis; highlighted means are in top statistical group

¹102 passes with Rutgers Wear Simulator applied Apr-June

²20 games simulated traffic applied with Cady Traffic Simulator

Prosperity Kentucky bluegrass



Mean percent green cover* ratings for entries in a Kentucky bluegrass mixture turf trial seeded fall of 2008 near Hubbard, OR and subjected to traffic treatments using a Cady Traffic Simulator.

Entry	24 Nov 2009	18 Nov 2010	01 July 2011
80% Jump Start KB; 20% Gray Fox PR	38.5 ¹	61.9 ²	70.5 ³
80% Prosperity KB; 20% Manhattan 5 GLR PR	41.9	66.6	69.0
80% Avalanche KB; 20% Gray Goose PR	58.3	63.5	62.9
Prosperity	33.0	31.4	62.5
80% Right KB; 20% Silver Dollar PR	36.2	57.2	61.6
Avalanche	37.1	51.9	57.7
Jump Start	51.2	33.3	54.0
Midnight	32.1	46.6	49.6
Midnight II	44.8	41.2	44.3
LSD (0.05)	16.8	21.3	15.4
CV (%)	28.2	26.5	17.7

*evaluated using digital image analysis; highlighted means are in top statistical group

¹66 games simulated traffic applied

²54 games simulated traffic applied during spring and 42 games applied in fall

³24 games simulated traffic applied

80% Right KB + 20% Silver Dollar PR



Summary

- * Perennial ryegrass cultivars, overall, showed good wear tolerance
- * Kentucky bluegrass cultivars showed good wear tolerance, with some varieties exhibiting better performance at both trial locations
- * The addition of 20% perennial ryegrass to Kentucky bluegrass increased wear tolerance over time, compared to bluegrass alone