

Salinity Tolerance of Grasses Used for Boulevard Plantings

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Introduction

Grasses that are typically used for turfgrass plantings in the cold climate of Alberta and the Canadian Prairie Provinces are not tolerant of saline conditions that occur near roadways in our major cities. As a result, areas that are void of grasses often exist near the edge of roadways. Alternative grasses need to be determined that might be better able to survive these conditions.

Many grasses are being developed through breeding programs that are both drought and saline tolerant. However, these grasses have not been tested in our climate. In addition, a number of native grasses have been selected in Alberta that are thought to have good salinity tolerance. However, these have not been tested under conditions where grasses are mowed on a semi-regular basis.

Materials and Methods

On August 29, 2008 this trial was established along the edge of a moderately saline roadside boulevard in Edmonton, Alberta. Test plots measuring 1 X 3 metres were established from the edge of the road bed into the boulevard. Using a shaker bottle to apply, the grass seed was applied to the soil surface of each the plots. This was followed by a light raking of each plot to cover the seed. The 14 grass treatments were replicated four times within a randomized complete block design (RCBD) Table 1.

The grasses were not evaluated for the establishment in 2008. Evaluations of the treatments are to take place in the spring, summer and fall of 2009.

Table 1 – List of saline tolerant grasses in study, Edmonton.

Grasses	Seeding Rate
Idaho fescue	2.0kg/100m ²
Alkali bluegrass	0.5kg/100m ²
Early bluegrass	0.5kg/100m ²
Inland saltgrass	2.0kg/100m ²
Nuttall's weeping alkaligrass	0.7kg/100m ²
Fult's weeping alkaligrass	0.5kg/100m ²
Violet wheatgrass	1.6kg/100m ²
PST 101-390 Kentucky bluegrass	0.7kg/100m ²
Washington Kentucky bluegrass	0.7kg/100m ²
MX86 Sheep fescue	2.0kg/100m ²
Sealink slender creeping red fescue	0.7kg/100m ²
Northstar Kentucky bluegrass	0.7kg/100m ²
Canon Canada bluegrass	0.7kg/100m ²
Boreal creeping red fescue	2.0kg/100m ²

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