



Hopedale Park, Town of Oakville



## Competitive Turf: Overseeding for Weed Management

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**W**eed management on athletic fields and in municipal parks is becoming increasingly important as traditional weed control measures, such as herbicides, become unavailable due to municipal legislation and changing public perception. Currently, 90 municipalities in Canada have banned or restricted the use of herbicides affecting over 8 million Canadians. Turfgrass managers must turn to cultural practices and optimise their efficacy to develop an effective integrated pest management (IPM) program that decreases or eliminates the need for herbicides. IPM programs with a focus on weed management are important in delivering a good quality and safe playing surface for user groups.

Overseeding, the practise of seeding a desirable turf species into an established

turfgrass stand, is typically used to fill in bare areas and stabilize soil to create a uniform playing surface for athletes. Current overseeding practices typically use perennial ryegrass and Kentucky bluegrass to create a vigorous, wear tolerant playing surface. However, due to time restrictions and increased use of facilities, the potential to manipulate overseeding for weed suppression is not being realised. Research aimed at optimising overseeding as a weed management tool is currently under investigation at the University of Guelph. Thanks to funding by the Ontario Turfgrass Research Foundation (OTRF), NSERC and partnerships with the Municipality of Oakville and Pickseed Canada Inc., a total of seven field trials have been implemented at the Guelph Turfgrass Institute, the University of Guelph, and in the Municipality of Oakville.

Perennial ryegrass overseeding into pre-existing Kentucky bluegrass is being evaluated under low and high-use conditions and in non-irrigated and irrigated situations. Perennial ryegrass is quick to germinate and establish which is important when competing with weed species for light, water, nutrients and space. All plants compete for these four main elements and overseeding encourages a desirable turfgrass species to compete and establish as opposed to undesirable weed species.

The trials include evaluating three different rates of overseeding at 2, 4 and 8 kg/100 m<sup>2</sup> in all combinations with overseeding timing of May, July and September. Weed species are evaluated in each plot in May before treatments are applied, and re-evaluated in June, August and October. The predominant weed species

documented during the 2005 season were perennials which included dandelion, clover, broadleaf plantain and narrow-leaf plantain. Kentucky bluegrass and perennial ryegrass populations are also being monitored for the duration of the study to examine the effects of overseeding on the turfgrass stand. One field season has been completed to date and preliminary results indicate that overseeding in both the spring and fall at any of the tested rates assists in reducing weed populations. The study will continue in the 2006 growing season.

Overseeding investigations are essential in determining the best management practices for an IPM system. Through the investigation of the appropriate application timing and rates, overseeding, in addition to fertility and mowing frequency, will provide an alternative form of weed management to decrease herbicide use while maintaining a safe playing surface for athletes. ♦

## Spring Overseeding at the GTI



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