



Best Management Practices for New York State Golf Courses

Annual Bluegrass Invasion

Over time, annual bluegrass becomes the dominant species in turf. This invasiveness is a result of the highly adaptive and prolific reproductive capacity of annual bluegrass that favors its competitive ability over other cool season turfgrass. Therefore, regular surface disruption when desirable turf is not actively growing selects for the invasive annual bluegrass.

Eventually, every course faces the choice to renovate or manage, invariably when there is catastrophic failure. Renovation eradicates and then manages to exclude annual bluegrass, hopefully with proper site modifications to allow perennial species to thrive. Conversely, others choose simply to manage the annual bluegrass type that has colonized the location. This is a “pay me now or pay me later” situation where management is less disruptive, but the inputs required to sustain adequate turf are costly.

Research shows that annual bluegrass requires significantly more inputs to provide acceptable quality golf turf, especially on putting greens, than more perennial species such as bentgrass or fescues.



Annual bluegrass invasion into existing bentgrass putting green. Over time, the continued surface disruption and shift in maintenance will lead to increasing populations of this invasive species. *Source: Frank Rossi.*

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Annual bluegrass is very susceptible to winter damage, especially from ice accumulation. Note the live bentgrass amongst the dead annual bluegrass. As the turf thins, the potential for off-site movement of inputs increases.

Source: Frank Rossi.

Annual Bluegrass and Water Quality

For water quality protection, the answer seems obvious that the less annual bluegrass being managed, the fewer inputs required, and the lower the risk to water quality. While this solution may not be as practical on putting surfaces, the putting surfaces comprise less than 10% of the managed turf. It is fairway, rough, and tee areas where annual bluegrass challenge water quality preservation with large tracts of land being treated to sustain a weedy species.