

CUTT

Spring 1993 • Volume Four • Number One • A Publication of Cornell Cooperative Extension

Annual Bluegrass Biology and Control

Annual bluegrass (*Poa annua* L.) is one of the most persistent and troublesome weeds of high-maintenance cool season and warm season turfgrasses. It is well adapted to close mowing, high nitrogen fertilization, frequent irrigation, and compacted soils, and is a primary invader in damaged or open areas. Consequently, it is sometimes maintained as a monoculture (if you can't beat it—join it?) but requires intensive maintenance and frequent fungicide treatments. It is generally considered a weed in intensively managed turf because it is a prolific seedhead producer, susceptible to heat, drought and many diseases, and is unsightly when mixed with other grasses. ■

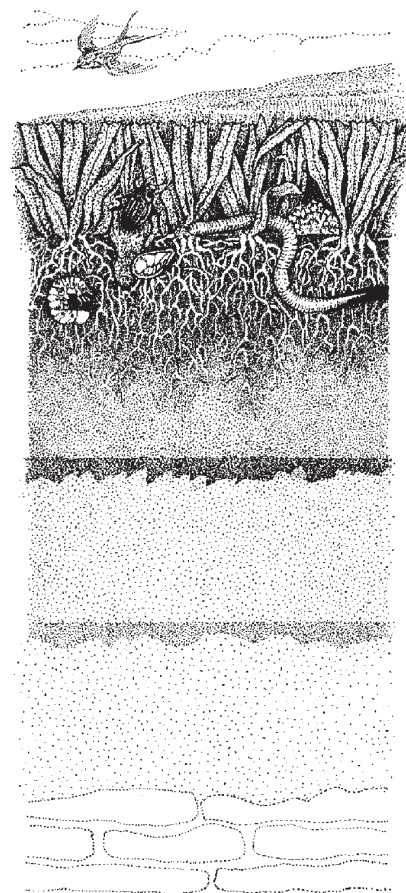
The climate, location, level of the infestation, and management of the turf infested with annual bluegrass will determine the most appropriate and effective methods for managing this pest. The first and most important step in attempting to control any weed is to first identify it and understand its life cycle.

Biology and Life Cycle

Poa annua is classified into two major plant types or subspecies: annual (*Poa annua* ssp. *annua*) and perennial (*Poa annua* ssp. *reptans*). The primary differences between the subspecies are the root system, growth habit, seed production and, of course, the life cycle (Table 1). Within each subspecies, are biotypes which differ in subtle ways. For example: a biotype collected from fairway turf may not survive the close mowing on a green; whereas, the biotype from the green will survive

fairway conditions but may be less competitive at the higher mowing height. Clearly, the most important difference affecting control decisions is the difference in the life cycle—annual vs. perennial. The perennial subspecies is more difficult to control because of its ability to survive summer heat and drought, which would kill the annual subspecies, by entering a summer dormancy and resprouting when weather is more conducive to growth. Another difference worth noting is seed dormancy. Seed of the perennial subspecies have no dormancy requirement and can germinate at any time of year. In contrast, seed of the annual biotype must go through an after-ripening period which delays germination to the late summer or early fall (and sometimes in early spring).

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