Altering the growth rate of turfgrass through exogenous applications of various chemicals has been a research endeavor of turfgrass scientists for more than 40 yr. In most situations, the vertical development of a turfgrass sward does not improve the quality of the stand (aesthetically or functionally). However, the removal of this unneeded foliar growth results in substantial maintenance expense primarily in the form of labor, equipment, and fuel. Certainly, the cosmetic result of high-quality mowing is important. However, if mowing "stripes" are not a part of the requirement for aesthetic acceptability, then chemical growth suppression would be acceptable in principle.

Chemicals that are specific enough to only suppress vertical foliar growth and not development at any other meristem are not currently available. Since the middle 1940s, several chemicals have been researched for their potential as turfgrass growth regulators (PGR). Among these chemicals were B-995, phosphon, ethrel, maleic hydrazide, chlorflurenol, gibberellins, and kinins. Beard reviewed these materials in 1973, while more recently, reviews of growth regulation in turfgrass science has been done by Elkins (1983) and Watschke (1985). It is apparent from these reviews that chemical suppression of turfgrass growth cannot be accomplished without negatively impacting the ability of treated turf to recover from any form of stand loss. The ability of turfgrasses to recover from injury albeit from pests, environment, or physical abuse, is one of the most important attributes they possess. To decrease the inherent recovery capability of a grass by applying growth-suppressing chemicals can only be done with the full realization of the consequences.