Turf and Landscape Weed Control, Towards Integrated Weed Management

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Management of weeds in turfgrasses and landscapes has evolved over the last 100 years. Grazing pastures were gradually converted to more meticulously manicured aesthetic areas and gardens were built to approximate natural landscapes to beautify homes and public areas. Along with this evolution have come changes in the tools and practices used for weed control. This presentation explores some of these changes and the impact on current and future practitioners of weed control. The widespread use of herbicides for weed control didn't become commonplace until the late 1950s and 1960s. Initial herbicides were very harsh materials and very difficult to handle and use. Gradually more user-friendly materials were developed in the 1970s and 80s. By this time turf and landscape weed managers began relying heavily on these products for selective control of grass and broadleaf weeds. But societal changes have also caused more close scrutiny of the products being used. Past evaluation focused on the efficacy of potential herbicides but more and more attention was focused on non weed control properties such as non-target effects, persistence and impact on the environment. The weed manager today must not only produce healthy, weed free turf and landscape but also be concerned with how they produce these results. This presentation focuses on several topics that should be considered when planning a weed management program. Three examples are given to spur the audience to think about some of these areas in addition to simple control of weeds. Substituting a new reduced risk low rate herbicide for a former multiple active ingredient standard delivers excellent weed control with more than a 200 fold reduction in pounds of pesticide used per acre. In the second example, understanding the biology of the pest and expanding uses of a current pre-emergent herbicide into postemergent control allows replacement of a phased out herbicide and could possibly provide control of a second major weed pest with a single herbicide application. In the final example, by adding a residual herbicide to a standard contact herbicide programs for weed control in landscape areas, fewer applications are required and risk of weed resistance is reduced. By knowing the biology of pest weeds and the properties of available control tactics, weed manager have the best chance of succeeding in managing weeds and providing these results in the context of ever more stringent oversight and regulations.