Know Your Pest!

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Without question, having a comprehensive knowledge of a respective pest is the key to successful management! Regardless of the pest you are attempting to control (a disease pathogen, an insect, or a weed), you must first be able to accurately identify the pest.

Next, you must know as many attributes and characteristics about its biology as possible including behavior and habits, life-cycle, life stage that causes damage, as well as when it is most susceptible or vulnerable to respective control tactics. Without such information, effective management of a respective pest is jeopardized.

For example, given the fact that most white grubs are most vulnerable to chemical treatments when they are newly hatched and they are quite difficult to control as fully mature, third-instar grubs, it would not be advantageous to make an application of a grub control product in the spring. Not that the treatment application of the respective control product will not provide any control, but a significantly higher percentage of control (> 90% compared to 65% - 70%) could have been attained if the control application was made when the grubs were newly hatched, young grubs.

Subsequently, the timing of a treatment is crucial to effective control. This concept is further illustrated by the biology of black cutworm (BCW) caterpillars. Since BCW caterpillars feed on the foliage of turfgrassses nocturnally (at night), the most effective control strategy is to apply a respective insecticide treatment in the late-afternoon or early-evening and to withhold irrigation for at least 12 hours to allow the BCW caterpillars to be exposed and/or consume the control agent. As a result, the maximum amount of control can be achieved; otherwise the percent control declines due to factors such as lack of exposure, photodegredation of the insecticide, as well as volitalization of the insecticide. Examples are endless; therefore, ensure you know what pest you are dealing with, fully understand its biology, then implement a control tactic that will maximize its control.

Ultimately, you may save valuable resources such as time and money, as well as protect the environment by not having to make repeat treatment applications due to poor control with initial control application.