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Controlling Invasive Crane Flies and White Grubs: Two for One?

Damaging infestations of invasive crane flies are building in home lawn, golf course and other turf settings across western NYS. As a short-term management approach, insecticides can be a reliable and efficacious control tactic. We have demonstrated or validated the efficacy of a wide range of control products available to pest management practitioners in New York State. Even though invasive crane flies were not detected until 2004 in the Northeast U.S., there are >200 products labeled for the control of larvae, including viable alternatives for preventive and curative control windows. Among them are several classes of active ingredients: anthranilic diamide (chlorantraniliprole), biologicals (*Beauveria bassiana*), carbamate (carbaryl), insect growth regulators (azadirachtin), neonicotinoids (imidacloprid), organophosphate (chlorpyrifos, trichlorfon), oxadiazine (indoxacarb), pyrethroids (e.g., bifenthrin), and dual compounds (bifenthrin+carbaryl, bifenthrin+imidacloprid, cyfluthrin +imidacloprid).

Nevertheless, it is the need for an additional insecticide application that may be one of the most serious consequences of invasive crane fly establishment. As we understand them currently, the best control windows are in spring (April to May) or autumn (September to October), essentially too early or too late to overlap with the traditional periods of preventive (June to early August) and curative (late August to early September) white grub control. Like white grubs, invasive crane flies are bound to become widespread locally. Our previous studies showed, for instance, that within 1 or 2 seasons after initial detection, 22-98% of golf course greens and tees are already infested. Prevention or suppression of crane flies may thereby entail broad applications across whole lawns and fairways. The result is that turf managers are forced to contemplate an additional insecticide application, implying a costly new economic and environmental burden to the turfgrass industry.

Certain long-residual insecticides, when applied as early as April to target other turf pests (e.g. bluegrass billbugs and annual bluegrass weevil), can persist long enough to prevent white grub outbreaks

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