

INSECTICIDES FOR CONTROL OF WHITE GRUBS* IN KENTUCKY TURFGRASS

**(Masked chafers, Japanese beetle, Green June beetle, May beetle, Black turfgrass ataenius)*

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The following table lists insecticides currently available for controlling white grubs in Kentucky. Detailed information on biology and management of white grubs is provided in University of Kentucky Cooperative Extension Service publication ENT-10: *Controlling White Grubs in Turfgrass*. Consult label for detailed directions on use rates, mixing and proper application.

CHEMICAL NAME	BRAND NAME	FORMULATION ¹	COMMENTS
<i>Preventive Control</i>	<i>Products listed for preventive control have long soil residual and are meant to be applied before a potential grub problem develops. They are most suited for high-risk sites with a history of grub problems, or where heavy beetle activity was noted.</i>		
Chloranthaniliprole	Acelepryn	SC	Acelepryn (professional use) is effective as a preventive application targeting newly hatched grubs. Can be applied any time between May 15 and late July although optimal timing for most grub species is mid-June to mid-July. Also provides residual control of cutworms, sod webworms, and billbugs.
Clothianidin	Arena	G, WDG	Arena (professional use) is effective as a preventive application targeting newly hatched grubs. Timing is the same as for Acelepryn (see above). Some curative activity against larger grubs as well.
Halofenozide	MACH 2	G, L	Mach 2 (professional use) is effective as a preventive application targeting newly hatched grubs. Timing is the same as for Merit. Can also provide early curative control in August although slower and generally less effective than trichlorfon as a rescue treatment for large grubs.
Imidacloprid	Merit, Bayer Advanced Lawn Season-long Grub Control, Scott's GrubEx	G,WP	Merit (professional use) and Bayer Advanced and GrubEx (homeowner use) are effective as preventive application targeting newly hatched grubs. Timing is the same as for Arena (see above). Relatively ineffective as curative treatment against large grubs.
Thiamethoxam	Meridian	WG,G	Meridian (professional use) is effective as a preventive application targeting newly hatched grubs. Timing is the same as for Merit. Can also provide some early curative control.
<i>Combination Products</i>			
Clothianidin + Bifenthrin	Aloft	SC, G	These products contain a nicotinoid soil insecticide for white grubs plus bifenthrin, a pyrethroid, which controls surface-feeding pests. It is uncommon in Kentucky for there to be damaging levels of both white grubs and surface-feeding pests on the same turf site.
Imidacloprid + Bifenthrin	Allectus	SC, G	
<i>Curative Control</i>	<i>Products listed for curative control are normally applied in August or September, after the eggs have hatched and grubs are present.</i>		
Trichlorfon	Dylox, Bayer Advanced 24-hour Grub Control	G, SP	Professional and homeowner use. Good for rescue treatments against larger grubs. Relatively good at penetrating thatch
Carbaryl	Sevin	G, L	Professional and homeowner use. Very toxic to earthworms. Generally less effective than trichlorfon

<i>Biological/Microbial Insecticides</i>	<i>The following products are derived from living organisms. In general, they tend to be less reliable than conventional insecticides for control of white grubs.</i>		
Milky disease (<i>Bacillus popilliae</i>)	Milky Spore	Powder	Poor performance in Kentucky field trials. (For Japanese beetle grubs only).
Entomopathogenic nematodes (<i>Steinernema carpocapsae</i> , <i>S. glaseri</i> , <i>Heterorhabditis bacteriophora</i>)	Several products		Requires moisture for optimum performance. Do not apply when weather conditions are hot and/or dry. Inconsistent in Kentucky field trials.

¹Abbreviations: G=granule; L=Liquid; SC=suspension concentrate; SP=soluble powder; WP=wettable powder.

Trade names are used as examples. No endorsement is intended, nor criticism implied of similar products not named.