ENTFACT-441

UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

INSECTICIDES FOR CONTROL OF WHITE GRUBS* IN KENTUCKY TURFGRASS

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

Michael F. Potter and Daniel A. Potter, Entomologists

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
Preventive Control	***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.***		
Imidacloprid	Merit, Bayer Advanced Lawn Season-long Grub Control	G,WP	Merit (professional use) and Bayer Advanced (homeowner use) are effective against young, newly hatched grubs. Can be applied between May 15 and mid July, although optimum treatment period is mid June to mid-July. Ineffective as curative or "rescue" treatment against large grubs.
Halofenozide	MACH 2, Scott's Grub Ex	G, L	MACH 2 (professional use) and Scotts Grub Ex are effective against young grubs. Timing is the same as for Merit (see above). May also be used for early curative control although slower and generally less effective than trichlorfon against large grubs.
Curative Control	***Products listed for curative control are normally applied in August or September, after the eggs have hatched and grubs are present.***		
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
Biological/Microbial Insecticides	***The following products are derived from living organisms. In general, they tend to be less reliable than conventional insecticides for control of white grubs.***		
Milky disease (*Bacillus popilliae*)	Milky Spore	Powder	Poor performance in Kentucky field trials. (For Japanese beetle grubs only).
Entomopathogenic nematodes (*Steinernema carpocapsae, S. glaseri, Heterorhabditis bacteriophora*)	Several products		Requires moisture for optimum performance. Do not apply when weather conditions are hot and/or dry. Inconsistent in Kentucky field trials.

[1]Abbreviations: G=granule; L=Liquid; SP=soluble powder; WP=wettable powder.

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