

SPEAKER RESOURCE GUIDE – ORNAMENTAL AND TURFGRASS APPLICATOR CIC 2024

Pesticide Applicator Testing Information

- a. Applicator Licensing and Certification - <https://iowaagriculture.gov/pesticide-bureau/applicator-licensing-certification>

1. **Calibrating a Stand on Spreader/Sprayer** – Adam Thoms, PhD., Associate Professor, Department of Horticulture, Iowa State University, athoms@iastate.edu.
 - a. Calibrating Boom Sprayers for Turf Applications - <https://www2.ca.uky.edu/agcomm/pubs/AGR/AGR239/AGR239.pdf>
 - b. Boom Sprayer Calibration - <https://www.stma.org/wp-content/uploads/2019/09/Boom-Sprayer-Calibration-STMAInstitute-logo.pdf>

2. **Grub Control in Turfgrass** – Raymond Cloyd, PhD., Professor and Extension Entomologist, Department of Entomology, Kansas State University, rcloyd@ksu.edu.
 - a. White Grub Control in Turfgrass - <https://hortnews.extension.iastate.edu/white-grub-control-turfgrass>
 - b. Grub Management in Turfgrass Using Insecticides - <https://bookstore.ksre.ksu.edu/pubs/MF3439.pdf>

3. **Defoliating Caterpillars** – Mark Runkel, Forest Health Technician, Iowa Department of Natural Resources, mark.runkel@dnr.iowa.gov.
 - a. Cankerworms (Spring and Fall) - <https://extension.umn.edu/yard-and-garden-insects/spring-and-fall-cankerworms>
 - b. Eastern Tent Caterpillar - <https://hortnews.extension.iastate.edu/eastern-tent-caterpillar>
 - c. Fall Webworm - <https://hortnews.extension.iastate.edu/fall-webworm>
 - d. Bagworm - <https://hortnews.extension.iastate.edu/bagworm>

4. **2024 Turfgrass Update: Herbicide Drift and Disease Management** – Adam Thoms, PhD., Associate Professor, Department of Horticulture, Iowa State University, athoms@iastate.edu.
 - a. What type of nozzles do you use? - <https://www.extension.iastate.edu/turfgrass/blog/what-type-nozzles-do-you-use>
 - b. Herbicide Drift and Drift Related Damage - <https://extension.psu.edu/herbicide-drift-and-drift-related-damage>
 - c. Catch My Drift - <https://www.golfcourseindustry.com/article/golf-pesticide-drift-spray/>

Example of Golf Course Putting Green Fungicide Program

Application Timing	FRAC Group Code	Group Names	Active Ingredient Options*	Notes
Mid-April	M-5	Chloronitriles	Chlorothalonil	Important to get ahead of dollar spot.
Mid/Late-April	3	DMI Fungicides	Tebuconazole	Provides longer, broad spectrum control.

Early-May	11 M-5	QoI Fungicides Chloronitriles	Qoi – not mentioned Chloronitriles - Chlorothalonil	Broad spectrum coverage and helpful against many of the patch diseases.
Late-May	1	MBC Fungicides**	Thiophante-methyl** + pythium control (AI not mentioned)	Potential for first shot of heat and humidity.
Mid-June	28 11 2	Carbamates QoI Fungicides Dicarboximides	Not mentioned Not mentioned Iprodione	Rotation of active ingredients, prime dollar spot season, and good conditions for brown patch.
Mid-July	11	QoI Fungicides	Pyraclostrobin	Tank mix DMI fungicide with an active ingredient for dollar spot if you have pressure at this point.
Early-August	2 28	Dicarboximides Carbamates	Iprodione Banol	21-day rotation due to disease pressures.
Mid-August	P-07 M-5	Phosphonates Chloronitriles	Fosetyl-AI Chlorothalonil	Tank mix with chlorothalonil active ingredient to ensure we are mixing different modes of action.
Early-Sept.	M-5	Chloronitriles	Chlorothalonil	If heat and humidity trend up, look to make sure you are still covered for the patch diseases, as well as pythium if needed.
Mid-Sept.	3	DMI Fungicides	Tebuconazole	Covering a broad spectrum of diseases.
Early-Oct.	M-5	Chloronitriles	Chlorothalonil	If needed due to disease pressure.

**Mentions of products and active ingredients are examples and are not an endorsement.*

Example of Athletic Field Summer Patch Management Program

Application Timing	FRAC Group Code	Group Names	Active Ingredient Options*	Notes
Mid-April	11	QoI Fungicides	Not specified	Important to get on summer patch pressures early before soil temperatures reach 65F.
Late-April	7 3	SDHI Fungicides DMI Fungicides	Not specified Not specified	Add DMI fungicide in case of dollar spot activity.
Early-May	11	QoI Fungicides	Not specified	
Late-May	7 3	SDHI Fungicides DMI Fungicides	Not specified Not specified	
Early-June	11	QoI Fungicides	Not specified	

Continue SDHI+DMI and QoI rotation during the growing season.

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5. **Common Ornamental Pests and Diseases in Iowa** – Zach Schumm, M.S., Insect Diagnostician, Iowa State Plant and Insect Diagnostic Clinic, zschumm@iastate.edu and Chelsea Harbach, Ph.D., Plant Disease Diagnostician, Iowa State Plant and Insect Diagnostic Clinic, charbach@iastate.edu.
- a. Iowa State Plant and Insect Diagnostic Clinic - <https://hortnews.extension.iastate.edu/pidc>
 - b. Aphids on Ornamentals - <https://extension.psu.edu/aphids-on-ornamentals>
 - c. Japanese Beetles - <https://hortnews.extension.iastate.edu/japanese-beetle>
 - d. Oystershell Scale - <https://hortnews.extension.iastate.edu/oystershell-scale>
 - e. Verticillium Wilt - <https://hortnews.extension.iastate.edu/verticillium-wilt>
 - f. Canker Disease - <https://www.iowadnr.gov/portals/idnr/uploads/forestry/fungalcanekers.pdf>
 - g. Pine Wilt - <https://hortnews.extension.iastate.edu/pine-wilt>
 - h. Rose Rosette Virus - <https://hortnews.extension.iastate.edu/rose-rosette>
 - i. Tobacco Rattle Virus - <https://hortnews.extension.iastate.edu/tobacco-rattle-virus-trv>