

Green University:

Learning pesticide basics and Category 24 topics through lecture and labs



UNIVERSITY OF GEORGIA
EXTENSION



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Introduction:

Georgia's green turf and ornamental industry is an important economic contributor across the state, valued at over \$1.37 billion dollars¹ annually. This agricultural commodity is more complex than other production systems due to its clientele diversity, widespread impact, and increased need for certified pesticide applicators and pesticide safety education. We sought to assist green industry professionals preparing for their commercial pesticide applicators exam as well as those needing recertification hours by offering a two-day program with a novel format combining experiential labs and traditional lectures to engage our audience.

Green University was offered as a dual-language program in both English and Spanish running concurrently to serve a diverse audience in collaboration with 13 extension agents and specialists. One day focused on the National Pesticide Applicator General Standards, and the following day focused on Georgia's Category 24: Turf and Ornamental Pest Control curriculum. Participants were able to attend one or both days for recertification credit.

The program offered traditional lectures in the morning coupled with hands-on laboratory sessions in the afternoon. Laboratory topics included touring UGA Griffin Campus entomology and plant pathology labs, sprayer calibration demonstrations, weed identification walks, "Reading the Pesticide Label" activity created by Brooklyne Wassel, and UV Tracer demonstrations coupled with an Enviroscope² watershed presentation.

Objectives:

- Integrate experiential and traditional teaching principles to educate participants about pesticide stewardship
- Increase understanding of integrated pest management (IPM) principles in urban landscapes
- Prepare participants for the Georgia Commercial Pesticide Applicators Core and Category 24 Exam



Pictured collaborators from left to right: Dr. Allison Johnson, Dr. Laura Ney, Rolando Orellana, Eric Marlowe, Brennan Jackson, Brooklyne Wassel, Whitney Ottinger, Kim Toal, and Sergio Sosa



Demonstrating a crack and crevice application with a hand pump sprayer for the UV Tracer lab



Preparing a digital microscope to display live nematodes during a UGA Griffin Campus lab tour



Off-target pesticide movement onto hands shown with the UV Tracer demonstration



Non-point source pesticide pollution scenarios with the Enviroscope² watershed model demonstrated by specialist Dr. Allison Johnson



UGA Griffin Campus laboratory tour hosted by Entomology Associate Professor Dr. Shimat Joseph



A closer look at the Enviroscope² model and reagents used to demonstrate off-target pesticide movement into Georgia's watersheds

Results & Impact:

Thirty-four participants were engaged in 12 hours of programming across two days earning 165 recertification credit hours.

- 80% of participants strongly agreed they now had the resources they need to make an IPM plan
- 72% of participants strongly agreed that they understood sprayer calibration and plan to read the label before making a pesticide application

Written participant feedback included:

"Did a great job making the lecture portion feel alive and more interactive."

"Speakers did a fantastic job of explaining the material and keeping the audience engaged."

Conclusions:

Program evaluation responses were overwhelmingly positive. Feedback indicated participants were more confident understanding the importance of personal protective equipment (PPE), aware that they are responsible for the environmental impacts of pesticide applications, and 72% strongly agreed information from these classes would help them in the future.

Eighty percent of post-program respondents agreed they understood and could make an IPM for the pest they have identified, while also stating they will use UGA Extension for resources moving forward. Implementing IPM plans in green industry production systems can increase the efficacy and decrease the quantity of pesticides applied in urban landscapes. This can reduce operation costs and potential off-target pesticide movement.

Contributors will continue to host Green University programming annually to meet the needs of Georgia's turf and ornamental pest control operators.

Acknowledgements & References:

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¹ Farm Gate Value Survey and Reporting System. farmgate.caes.uga.edu. 2022. <https://farmgate.caes.uga.edu/ReportTotalValue.aspx>

²Enviroscope, Herndon VA, USA 20171



Weed identification walk led by specialist Dr. Patrick McCullough



National Pesticide Applicator Core Lecture delivered by agent Brennan Jackson