
Significance to the Horticulture Industry

Boxwood Blight

Analyzing the Structural Shifts in U.S. Boxwood Production Due to Boxwood Blight. Charles R. Hall, Chuanxue Hong, Fred E. Gouker, and Margery Daughtrey. *Journal of Environmental Horticulture* 39(3): 91–99

The green industry remains an important contributor to the U.S. economy and to individual states and regions. The green industry is extremely broad-based, with the landscape services and wholesale-retail trade sectors existing in virtually all communities in the nation. Boxwood shrubs represent an important genus within the evergreen shrubs category and boxwood blight threatens to undermine its economic importance. The findings in this report are critical to our understanding of the boxwood market and issues affecting the green industry from boxwood blight. Participants in the green industry now have access to data to assist them in making strategic decisions regarding future investments to mitigate the effect of boxwood blight in their respective businesses. In addition, policymakers have better information to inform their decisions regarding efficient allocation of resources in combating this disease.

Factors affecting Boxwood Blight Spread under Landscape Conditions. J. A. LaMondia, E. Allan-Perkins and S. Kodati. *Journal of Environmental Horticulture* 39(3):100–107

Boxwood blight is the most important disease of boxwood in the United States. The *Calonectria pseudonaviculata* pathogen has spread from two states in 2011 to at least 28 states plus the District of Columbia within eight years. In these experiments we demonstrated that spread within a landscape setting can be minimized by sanitation, the use of mulch, planting less susceptible boxwood cultivars and applying fungicides. We also demonstrated that spore clumps could be moved by contact under dry conditions, survive extended periods without moisture that single conidia could not, and germinate when suitable conditions occur.

Container Irrigation

Use of Routine Leaching Fraction Testing to Guide Irrigation at a Container Nursery. Jeff B. Million and Thomas H. Yeager. *Journal of Environmental Horticulture* 39(3):108–114

Methods for applying irrigation water efficiently are needed for production of container-grown plants. This study conducted at a cooperating nursery compared an automated, irrigation control system based on leaching fraction testing and real-time weather, with the nursery's traditional method of subjectively rating moisture of substrate core samples for adjusting irrigation. Results indicated that significant water savings (5-50%) can be achieved with the automated system. However, due to the low cost of pumping water relative to the price of the marketable product, we concluded that the greater economic benefit of reduced irrigation water applied was to provide increased capacity for additional production under consumptive water use limitations rather than to reduce the unit cost of production.

Pine Straw Mulch

A Comparison of the Attributes of Pine Straw from Southern Pine Species. Zachary Singh, Adam Maggard, Rebecca Barlow, and John Kush. *Journal of Environmental Horticulture* 39(3):115–122

Pine straw is a commonly used organic mulch in landscaping applications. Organic mulches can provide benefits such as improved soil moisture, moderating soil temperatures, and suppressing weed growth. Longleaf pine straw and slash pine straw are the two most commonly used species of southern pine found in pine straw markets in the Southeast region of the United States and longleaf pine straw is often sold a premium price compared to slash pine straw. To better understand the attributes of these pine straw types, this research compared the response of soil properties, weed biomass, and tree growth to the application longleaf pine straw and slash pine straw. We found that both longleaf and slash pine straw maintained greater soil moisture, moderated soil temperatures, reduced weed growth compared to non-mulched control treatments, and decomposed at similar rates. This provides evidence that both types of pine straw provide similar benefits in landscape settings when used as mulch and differences between the two are likely aesthetic in nature but further research is warranted on this regard. Between longleaf and slash pine straw, we recommend choosing the one that is most aesthetically pleasing as both will provide similar attributes.

Production Practices

Changes in Production Practices by Green Industry Growers from 2009 to 2019. Alicia L. Rihn, Charles R. Hall, Bryan J. Peterson, Ariana P. Torres, Marco A. Palma, and Hayk Khachatryan. *Journal of Environmental Horticulture* 39(3):123–130

The green industry is an important contributor to the U.S. agricultural economy and to individual regions and states (Hall et al. 2020). This broadly-based industry includes landscape services and wholesale-retail trade sectors existing in virtually all communities in the nation. In contrast, the production and manufacturing sectors (e.g., containers/pots, media, packaging, fertilizer, pesticides, greenhouse supplies, etc.) of the industry are concentrated in some states and contribute disproportionately to their state's GDP because out-of-state shipments bring new money into the local economies. The findings in this report are critical to our understanding of the structure-conduct-performance issues affecting the green industry, as well as the economy at large. Participants in the green industry now have access to data to assist them in making strategic decisions regarding future investments in their businesses. In addition, policy makers have more information to inform their decisions regarding efficient allocation of resources among competing industries and interests.

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