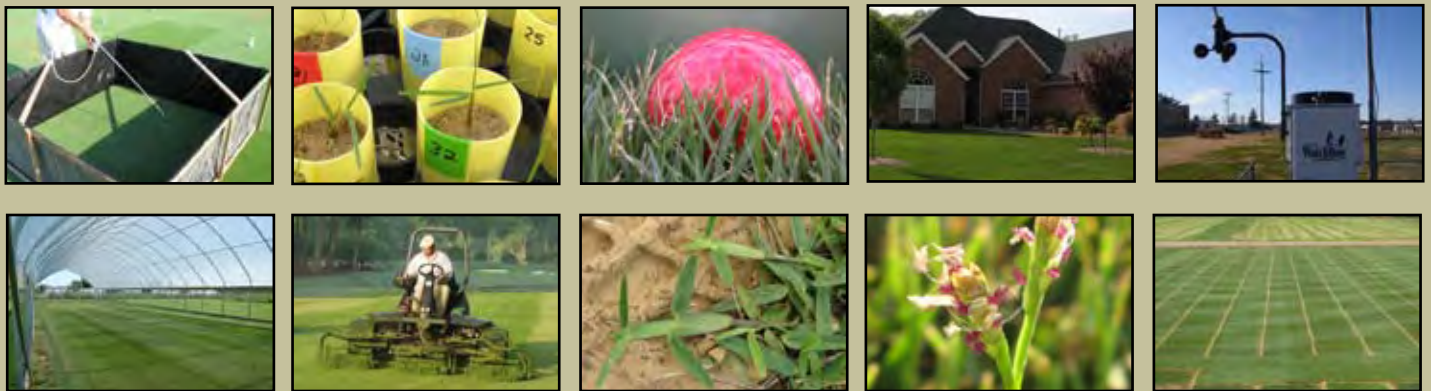


Arkansas Turfgrass Report 2009

Douglas Karcher, Aaron Patton,
and Michael Richardson, editors



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Arkansas Turfgrass Report 2009

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Conversion Table

Conversions for commonly-used units in papers:

$$1 \text{ ft} = 0.30 \text{ meters} = 30.48 \text{ cm}$$

$$1 \text{ inch} = 2.54 \text{ cm} = 25.4 \text{ mm}$$

$$1 \text{ ounce} = 28.3 \text{ g}$$

$$1 \text{ lb} = 0.454 \text{ kg} = 454 \text{ g}$$

$$1 \text{ PSI} = 6.9 \text{ kPa}$$

$$1 \text{ ppm} = 1 \text{ mg} / \text{kg}$$

$$1 \text{ gallon} / \text{acre} = 9.35 \text{ L} / \text{ha}$$

$$1 \text{ lb} / 1000 \text{ ft}^2 = 4.9 \text{ g} / \text{m}^2$$

$$1 \text{ lb} / 1000 \text{ ft}^2 = 48.8 \text{ kg} / \text{ha}$$

$$1 \text{ lb} / 1000 \text{ ft}^2 = 43.56 \text{ lb} / \text{acre}$$

$$1 \text{ lb} / \text{acre} = 1.12 \text{ kg} / \text{ha}$$

$$1 \text{ bushel} / 1000 \text{ ft}^2 = 3.8 \text{ m}^3 / \text{ha}$$

$$^{\circ}\text{F} = (9/5 * ^{\circ}\text{C}) + 32$$

$$^{\circ}\text{C} = 5/9 * (^{\circ}\text{F} - 32)$$

To Our Colleagues and Constituents

Turfgrass Industry:

As the green industry continues to expand across Arkansas and the nation, the University of Arkansas Division of Agriculture has assembled an outstanding team of researchers, extension personnel, and educators that are working to solve some of the most pressing needs of that industry. One segment of that industry that continues to provide a significant impact on the state's economy is the turfgrass industry, which includes lawn care, parks, sports turf, sod production, and golf course maintenance. In a recent survey, it was estimated that the turfgrass and lawn care industry in Arkansas provides over 8,600 jobs and contributes over \$336 million annually to the state's economy.

The Arkansas Turfgrass Report is a Research Series that is published annually by the Arkansas Agricultural Experiment Station and features significant findings made by turfgrass scientists during the past year. Although this publication primarily summarizes findings from the research program, it also highlights advancements in teaching and extension programs, as well as significant issues that affect the industry as a whole. It is our desire that this publication will keep our stakeholders abreast of significant changes and advancements that affect our industry.

We are very proud of this third installment of the Arkansas Turfgrass Report, which includes 34 papers from faculty, staff, and graduate students. We hope these findings will enhance your ability to conduct business in an efficient and productive manner. The content of this edition of the Arkansas Turfgrass Report has been organized into categories in the Table of Contents ("Cultivar Trials," "Turf Culture," "Pest Control," etc.) for your convenience.

We would also like to recognize the many organizations, companies, and individuals who have given their time, money, and talents to make our program successful. We are extremely grateful to the many people who contribute to this program.

We hope that this publication will be of value to all persons with an interest in the Arkansas green industry.



Doug Karcher
Associate Professor



Aaron Patton
Assistant Professor



Mike Richardson
Professor

University of Arkansas Turfgrass Research Cooperators

The University of Arkansas turfgrass research team is grateful for assistance in the form of donated equipment and product, and research grants from the following associations and companies. Our productivity would be significantly limited without this support.

Andersons Golf Products	Milorganite Chemical
Aquatrols, Inc.	Mississippi State University
Arkalite	Monsanto Company
Arkansas Farm Bureau	Jerry Musick, Razorback Park Golf Course
Arkansas Turfgrass Association	National Turfgrass Evaluation Program
BASF	NexGen Research
Bayer Environmental Science	Brandon Nichols, Fayetteville Country Club
Pat Berger, University of Arkansas Athletics	North Carolina State University
Casey Crittenden, Bella Vista POA	OJ Noer Foundation
Conwed Fabrics	Patten Seed Co.
Crossover Liquor	PBI Gordon
Jason Cuddy, Springdale Country Club	Pennington Seed
DeWitt Company	PermaGreen Supreme, Inc.
Double Springs Grass Farm	Precision Labs
Dow AgroSciences	Professional Turf Products
DuPont	Profile Products Co.
Environmental Turf	Pure-Seed Testing
Ewing Irrigation	Quail Valley Sod
FMC Corporation	Quali-Pro
Georgia Pacific	Scotts Professional Turf
Golf Course Superintendents Association of America	Seed Research of Oregon
Golf Course Superintendents Association of Arkansas	Seeds West, Inc.
Dr. Wayne Hanna, University of Georgia	Spectrum Technologies
Helena Chemical	Stillwater Equipment Co.
ISK Biotech	Syngenta
Jacobsen (Textron)	Texas A&M University
Johnston Seed Co.	The Toro Company
Lebanon Seaboard	TifSport Growers Association
Lee McBurnett, Stonebridge Meadows	Todd Towery, Pinnacle Country Club
Lentz Sand and Gravel	Turfgrass Producers International
Jason Miller, The Blessings Golf Club	United States Golf Association
Milliken	University of Florida
	Winrock Grass Farm

We regret that some individuals or companies may have been inadvertently left off of this list. If your company has provided financial or material support for the program and is not mentioned above, please contact us so that your company's name can be added in future reports.

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