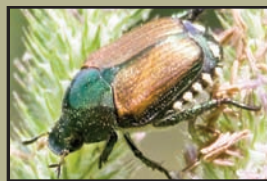
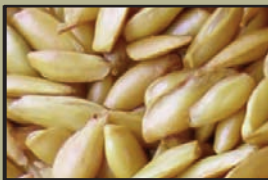


Arkansas Turfgrass Report 2008

Michael Richardson, Douglas Karcher,
and Aaron Patton, editors



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Arkansas Turfgrass Report 2008

Edited by:

Michael Richardson, Professor

Douglas Karcher, Associate Professor
and Aaron Patton, Assistant Professor

Department of Horticulture
University of Arkansas

**University of Arkansas Division of Agriculture
Arkansas Agricultural Experiment Station
Fayetteville, Arkansas 72701**

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No findings, conclusions, or reports regarding any product or any process that is contained in any article published in this report should imply endorsement or non-endorsement of any such product or process.

Conversion Table

Conversions for commonly used units in papers:

$$1 \text{ ft} = 0.30 \text{ meters} = 30 \text{ cm}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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 dollars 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 over 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 second installment of the Arkansas Turfgrass Report, which includes 33 papers from faculty, staff, and graduate students. We hope these findings will enhance your ability to conduct business in an efficient and productive manner.

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 forever indebted 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.



Mike Richardson
Professor



Doug Karcher
Associate Professor



Aaron Patton
Assistant 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.

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