



## University of Florida Turfgrass Research Projects for Y2K

The following list of current and ongoing projects at the University of Florida and the IFAS Research and Education Centers around the state is a reminder that meaningful research takes time and money. These projects are funded by donations from product manufacturers, seed and sod producers, GCSAA, USGA, FTGA and FGCSA sources.

Those oriented toward immediate results often forget that a research project proposal submitted and approved in one FGCSA/FTGA budget year may not get under way for several months or until the next season, depending on the nature of the project. Then the process of replication and documentation takes place followed by tabulation and interpretation of the collected data. The FGCSA board wants you to know the scope of all the research that is under way. The projects are grouped under topics of special interest.

### Methyl Bromide Alternatives

Fumigant Alternatives for the Replacement of Methyl Bromide, Unruh, Brecke, Kinloch & Dusky  
Impact of the Reduction of Methyl Bromide Concentration on Preplant Fumigation, Unruh & Brecke  
Metham Sodium/Chloropicrin Rate Response Study, Unruh & Brecke  
Methyl Bromide Alternative #300 Shank Spacing Study, Unruh & Brecke  
Methyl Bromide Alternative #200 Shank Spacing Study, Unruh & Brecke  
Screening of High Nitrogen Containing Compounds for Use as Soil Fumigants, Unruh, Johnson, & Kinloch

### Environmental Studies

An Evaluation of Nitrogen Leaching from Golf Course Greens and Fairways Irrigated with Reclaimed Water, G. Snyder & Cisar  
Comparative Leaching Properties of Calcium Nitrate, Sartain & Brown  
Comparison of Primo EC and Primo MEC on Golf Course Fairways, Unruh  
Determination of Shade Tolerance Mechanisms in St. Augustinegrass, Trenholm & Nagata  
Dislodgeability and Volatilization of Pesticides Applied to Golf Course Turf, G. Snyder & Cisar  
Envirotron Study of Water and Pesticide Movement Through

Modified USGA Golf Green Root-Zone, Nkedi-kizza, Sartain, Prabowo & Godding  
Evaluation of Florida Yards Concept to Reduce Nitrogen Runoff, Cisar  
Evaluation of Integrated Turfgrass Management Practices for Selected Ultradwarf Bermudagrass, Sartain & Kruse  
Evaluation of Sporobolus Viginicus: Drought Tolerance, Trenholm  
Evaluation of Sporobolus Viginicus: Fertility Requirements, Trenholm  
Evaluation of Stress Tolerance in Zoysiagrass Lines, Trenholm & Scully  
Fate of N During Grow-in of a Golf Course Fairway Under Different N Management Practices and  
"Florida Yard" Concept for Reducing Nitrogen Runoff into Sarasota Bay, G. Snyder & Cisar  
Influence of Cytokinins and Potassium on Drought and Cold Stress in St. Augustinegrass, Trenholm  
Influence of Light Quality and Quantity on Bermudagrass Growth, Miller  
Influence of Silica on Drought Tolerance of St. Augustinegrass, Trenholm, Nagata & Datnoff  
Influence of Silica on Salt Tolerance of St. Augustinegrass, Trenholm, Nagata & Datnoff  
Influence of Silica on Shade Tolerance of St. Augustinegrass, Trenholm, Nagata & Datnoff  
Irrigation Intensities, Sartain & Shaddox  
Mobility and Persistence of Pesticides Applied to a USGA Green - Dislodgeability and Risk Assessment, Cisar

Monitoring the Losses of N from an Effluent-Irrigated Golf Course, Cisar  
Reducing N Leaching in Golf Course Turf: A BMP Implementation Project, Cisar

### Mole Cricket Control

Activity of Thiamethoxam and a Combination Product Against Mole Crickets in Turf, Unruh  
Control of Mole Cricket and Other Turf Soil Insects with Dursban Two Coat Applied and a Surface Treatment Compared With an Injected Treatment, Unruh  
Efficacy of DeltaGard on Fertilizer Materials for Late Season Mole Cricket Control in Turf, Unruh  
Mole Cricket Control with DeltaGard SC and G Formulations Delivered as a Subsurface or Surface Application, Unruh  
Subsurface and Surface Application Rates of Talstar for Mole Cricket Control in Turf, Unruh

### Biological Mole Cricket Controls

A Cold-Tolerant Strain of Ormia Depleta - Frank  
Dual Action of Steinernema Scapteriscis and Larra Bicolor on Six Florida Golf Course - Frank  
Food of Adult Ormia Depleta - Frank & Welch  
North Florida Populations of Larra Bicolor - Frank & Treadwell  
Prey-Finding by Pheropsophus Aequinoctialis - Frank & Lake  
Temperature-Driven Development in Mole Crickets and Ormia Depleta and Larra Bicolor - Frank & Cabrera

### Nematode Control

Biological Control of Belonolaimus Longicaudatus by Pasteuria N. Sp in Turfgrass, Giblin-Davis  
Evaluating Post plant Biorationals for Control of Belonolaimus Longicaudatus in Turf, Giblin-Davis  
Evaluating Sting Nematode Resistance in St. Augustinegrass and Bermudagrass, Nagata & Scully  
Evaluation of Hybrid Bermudagrass Dwarfs and Ultradwarfs for Tolerance to the Sting Nematode, Belonolaimus Longicaudatus, Giblin-Davis  
Field Efficacy Of Telone II For Plant-Parasitic Nematode Control in Bermudagrass, Giblin-Davis



Laboratory and Field Studies on DiTera against *Belonolaimus longicaudatus*, Giblin-Davis

Turf Molecular and Morphological Database for Nematode Identification in Florida and the Caribbean, Giblin-Davis

## Biological & Organic Studies

Bacterial Populations and Diversity within New USGA Putting Greens, Elliott, Guertal, Kloepper & Skipper

Compost as the Organic Matter Component in a USGA Golf Green Root-Zone, G. Snyder & Cisar

Density Dependent Regulation of *Belonolaimus longicaudatus* by *Pasteuria N. Sp.* in Turfgrass, Giblin-Davis

Description of a New Species of *Pasteuria* that Parasitizes the Sting Nematode, *Belonolaimus longicaudatus*, Giblin-Davis

Effects of Osmoregulators on *Gaeumannomyces graminis* in Solid and Liquid Media, Elliott

Evaluation of Compost Sources and Rates for Suitability in Roadside Turfgrass Growth, Miller

Evaluation of Composts for Disease Management and Enhance Quality of Golf Course Greens, Datnoff, Cisar & Snyder

Genetic Evaluation of the Soil borne Fungal Pathogen *Gaeumannomyces graminis*, Elliott

The Effect of Composts in Topdressing on Disease Incidence on Turf Performance, and Microbial Activity, Cisar

## Weed Control

Annual Blue-Eyed Grass Control, Brecke & Unruh

Annual Grass Control with Dimension + Ronstar in Bermudagrass, Brecke & Unruh

Annual Grass Management Systems with Corn Gluten in Bermudagrass, Brecke & Unruh

Broadleaf Weed Control, Brecke & Unruh

Broadleaf Control with Sulfentrazone and Carfentrazone, Brecke & Unruh

Control with Corn Gluten in Bermudagrass, Brecke & Unruh

Effect of Mowing, Interval on Torpedo, grass Control with Drive in Bermudagrass, Brecke & Unruh

Herbicide Tolerance of Bermudagrass Breeding Lines, Dusky, Brecke & Scully

Herbicide Tolerance of St. Augustinegrass breeding Lines, Dusky, Brecke & Nagata Annual Grass Weed Control Strategies in Bermudagrass Production and Maintenance Programs, Dusky & Brecke

Lawn Burweed Control - Spring, Brecke & Unruh

Nitrogen Fertilization Effect on Torpedograss Control with Drive in Bermudagrass, Brecke & Unruh

Nutsedge Management in Bermudagrass, Brecke & Unruh

Pennant Formulation Evaluation in Bermudagrass, Brecke & Unruh

Pennant Tolerance in St. Augustinegrass, Brecke & Unruh

*Poa annua* Control in Non-overseeded Bermudagrass, Brecke & Unruh

*Poa annua* Control in Overseeded Bermudagrass, Brecke & Unruh

Post emergence Annual Grass Control in Bahiagrass with Envoy, Brecke & Unruh

Post emergence Annual Grass Control in St. Augustinegrass with Envoy, Brecke & Unruh

Post emergence Herbicides, Weinbrecht & Miller

Pre-emergence Annual Grass Control in Bermudagrass, Brecke & Unruh

Rates, Tank-mixes & Timing of Post emerge Herbicides for Torpedograss, Weinbrecht & Miller  
Small Flowered Alexandergrass Efficacy Following Various Combinations of Timed Applications of

Sulfentrazone and Carfentrazone in Bermudagrass, Brecke & Unruh

Sulfentrazone and Carfentrazone in Centipedegrass, Brecke & Unruh

Sulfentrazone and Carfentrazone in St. Augustinegrass, Brecke & Unruh

Torpedograss Control with Drive, Brecke & Unruh

Weed Control Strategies in St. Augustinegrass Production, Dusky & Brecke

Yellow Nutsedge Control in Bermudagrass with Sulfentrazone and Carfentrazone, Brecke & Unruh

## General Insect Control

Chinch Bug Biology, Control and Resistance Studies, Nagata & Cherry

Control of Turf Pests in Addition to Nematodes with Curfew Soil Injected on Fairways, Unruh

Effects of Bait Concentration on the Efficacy of Spinosad Bait Applied as a Broadcast Application in Range and Pastures, Unruh

Efficacy of Distance Fire Ant Bait for Control of Red Imported Fire Ants, Unruh

Insecticide Tests to Control Chinch Bugs, Cherry & Nagata

Phytotoxicity of Talstar Impregnated Fertilizer Products to Warm Season Turf, Unruh

Resistance of St. Augustinegrass to Chinch Bugs, Cherry, Nagata & Datnoff

Response of Red Imported Fire Ants to Reduced Rates and Concentrations of DE-105, Unruh

## Disease Control

Dwarf Bermudagrass Tolerance to Rubigan, Brecke & Unruh

Effect of Biologicals and Fungicides to Control Pythium in Bermudagrass Golf Greens Overseeded with *Poa Trivialis*, Datnoff & Cisar

Effect of Fungicides and Surfactants to Curatively Control Fairy Ring on Golf Course Greens, Datnoff & Cisar

Effect of Heritage and Daconil on Grey Leaf Spot Development, Datnoff & Nagata

Effects of Nutrition and Host Plant Resistance on Grey Leaf Spot Development, Datnoff & Nagata

Effects of Selected Cultural Treatments on the Incidence of *Gaeumannomyces graminis* root infection of Centipedegrass: Soil pH., Unruh & Lawson

Screening St. Augustinegrass for Resistance to Grey Leaf Spot Caused by *Pyricularia grisea*, Datnoff & Nagata

## Nutrient Management

Accuracy of NIRS Instrumentation for Determining Tissue Concentrations of Ca, Mg, P, and K, Miller

Comparative Evaluation of Milorganite as a Nutrient Source for Turfgrass, Sartain

Comparative Evaluation of Sulf-N 45 on Cool and Warm-Season Turfgrass, Sartain





Comparative N and Fe Release  
Properties of Micromate NS Iron,  
Sartain

Comparison of Slow-Release N Sources  
on Turfgrass, Sartain

Comparison of Sybron Organically  
Based Products with Conventional  
Fertilization and Evaluation of  
Their Influence on the Incidence of  
Dollar Spot, Sartain

Comparison of Viking Ship Products in  
Turfgrass Production, Sartain

Effects of Nutrition and Modification of  
Host Plant Resistance to Gray Leaf  
Spot Fungi and Chinch Bugs,  
Nagata, Datnoff & Cherry

Effects of Types and Rates of N on the  
Growth and Quality of Turfgrass,  
Sartain

Evaluation of Green Technologies  
Products on Turfgrass, Sartain

Evaluation of Nitrogen Sources for  
Quality & Longevity, Miller

Evaluation of Sirflor as a Slow-Release  
N Source for Turfgrass, Sartain

Using NIRS for Nitrogen Scheduling on  
Two Dwarf-Type Bermudagrass  
Cultivars, Miller

Using NIRS to Predict Nitrogen  
Concentrations in Bermudagrass  
Using a SPAD Chlorophyll Meter to  
Predict Nitrogen Concentration in  
St. Augustinegrass, Miller

Utilization of Nutri-Grow on Golf  
Course Putting Green Turf, Unruh

### **Turfgrass: Breeding and Evaluations**

A Study to Screen Tall Fescue  
Germplasm for Heat Tolerance,  
Dudeck & Duncan

Collection and Evaluation of Florida  
Bermudagrass and Zoysiagrass  
Germplasm, Scully

Cultivar Development of St.  
Augustinegrass, Nagata, Unruh,  
Dudeck & Cisar

Development of Centipedegrass  
Cultivars, Nagata & Scully

Effects of Seed Treatment and Media on  
Germination of 'NuMex Sahara'  
Bermudagrass, Dudeck

Evaluation of Various Cool-Season  
Grass Species, Mixtures, and/or  
Blends for Overseeded Winter  
Ground Covers Under Golf Course  
Fairway and Putting Green  
Conditions, Dudeck

New Grasses: NTEP Test on  
Ultradwarfs, Cisar

NTEP Cultivar Trial: Buffalograss, Unruh

NTEP Cultivar Trial: On-site Putting  
Green Bermudagrasses, Unruh

NTEP Cultivar Trial: Zoysiagrass, Unruh

NTEP Overseed Trials at Grand Cypress  
Country Club, Dudeck

NTEP Studies Involving Bermudagrass,  
St. Augustinegrass, and  
Zoysiagrass, Dudeck

Out-State Trials of Superior  
Bermudagrass Selections Under  
Golf Course Fairway Conditions in  
North, Central, and South Florida,  
Dudeck

Screening St. Augustinegrass  
Germplasm for Winter Hardiness at  
Blairsville, GA, Dudeck & Duncan

Tissue Culture of St. Augustinegrass,  
Nagata

UF Breeding Program Cultivar Trial:  
Dudeck Bermudagrass, Unruh

UF Breeding Program Cultivar Trial:  
Nagata St. Augustinegrass, Unruh

UF Breeding Program Cultivar Trial:  
Scully Bermudagrass, Unruh

UF Breeding Program Cultivar Trial:  
Scully Zoysiagrass, Unruh

UF Breeding Program Cultivar Trial:  
Scully Centipedegrass, Unruh

Ultra Dwarf Bermudagrass Studies in  
North Florida, Dudeck

### **Water & Soil Studies**

Deficit Irrigation of Turfgrasses, Miller

Erosion Control Along Florida  
Roadsides, Miller, Black & Kidder

Influence of Basic-H on Water Use  
Efficiency Under Turfgrass Culture,  
Sartain

Investigation of Coated Sands for Use in  
Putting Green Construction, Sartain  
& R. Snyder

Investigations of Soil Amendments for  
Nutrient and Water Retention,  
Miller

Soil and Turfgrass Tissue Analysis  
Correlation, Sartain & Higby

### **Sports Turf**

Cold Tolerance Evaluations of New St.  
Augustinegrass Cultivars, Miller

Correlation of Soccer Field Conditions  
to Player Perceptions, Miller

Correlation of Soil Moisture and Surface  
Hardness, Miller

Evaluation of Perennial Ryegrass for  
Spring Transition on Athletic Fields,  
Miller

Evaluation of Shoe Cleat Design on Turf  
Wear and Traction, Miller

Evaluation of Soccer Fields for  
Performance Standards, Miller

Soil and Tissue Analysis Correlation  
Stabilization of Athletic Field Soils  
Using Enkamat, Miller

Techniques for Evaluation of Traction  
on Athletic Fields, Miller

Dry Fertilizer  
Bulk Liquid Fertilizer



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