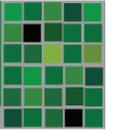




# Dairy Forage Research Center Scientists



Marshfield

## Mark Borchardt

*Research Microbiologist*

Phone: (715) 387-4943

E-Mail: mark.borchardt@ars.usda.gov

BS: Horticulture, 1980, University of Wisconsin – Madison  
PhD: Aquatic Ecology, 1991, University of Vermont  
Post-Doc: Aquatic Ecology, 1993, Philadelphia Academy of Natural Sciences

### Current Research

- Fate, transport, and health effects of waterborne agricultural zoonotic pathogens.

[Link to scientist's current research results.](#)



Marshfield

## Wayne K. Coblenz

*Research Agronomist and Dairy Scientist*

Phone: (715) 384-5784

E-Mail: wayne.coblenz@ars.usda.gov

BA: Chemistry, 1977, Western Maryland College  
MS: Dairy Science, 1982, The Pennsylvania State University  
PhD: Forage Agronomy, 1994, Kansas State University

### Current Research

- Investigation of changes in nutritional characteristics of forages as a result of: agronomic inputs, application of animal wastes, grazing, climate, and post-harvest management.

[Link to scientist's current research results.](#)



Madison

## Geoffrey E. Brink

*Research Agronomist*

Phone: (608) 890-0052

E-mail: geoffrey.brink@ars.usda.gov

BS: Agronomy, 1980, Pennsylvania State University  
MS: Agronomy, 1983, University of Minnesota  
PhD: Agronomy, 1984, University of Minnesota

### Current Research

- Grazing management to improve the yield distribution, utilization, and persistence of temperate, perennial grasses.

[Link to scientist's current research results.](#)



Madison

## John H. Grabber

*Research Agronomist*

Phone: (608) 890-0059

E-Mail: john.grabber@ars.usda.gov

BS: Agronomy, 1982, University of Connecticut  
MS: Plant Science, 1985, University of Connecticut  
PhD: Agronomy, 1989, Pennsylvania State University

### Current Research:

- Developing forage-based cropping systems for dairy farms.
- Improving protein and nitrogen use by dairy farms through the use of tannin and polyphenol containing forages.
- Identifying modifications to cell wall lignification and cross-linking to improve forage fiber digestion by cattle.

[Link to scientist's current research results.](#)



Madison

## Michael D. Casler

*Research Plant Geneticist*

Phone: (608) 890-0065

E-mail: michael.casler@ars.usda.gov

BS: Agronomy, 1976, University of Illinois  
MS: Plant Breeding/Genetics, 1979, University of Minnesota  
PhD: Plant Breeding/Genetics, 1980, University of Minnesota

### Current Research

- Designing forage plants with enhanced value for dairy production, profitability, and sustainability.
- Value-added products from forages and biomass energy crops.

[Link to scientist's current research results.](#)

More scientists on next page.



Madison

## Mary Beth Hall

Research Dairy Scientist

Phone: (608) 890-0078

E-Mail: marybeth.hall@ars.usda.gov

BS: Animal Science, 1982, Cornell University  
MS: Animal Science, 1983, Virginia Polytechnic Institute  
PhD: Animal Science, 1996, Cornell University

### Current Research

- Factors affecting profiles of ruminal fermentation products produced from nonfiber carbohydrates.
- Impact of effective fiber and protein on digestion of nonfiber carbohydrates and lactation performance of dairy cows.
- Evaluating and establishing methods for analyzing nutritionally relevant nonfiber carbohydrates in feeds.

[Link to scientist's current research results.](#)



Madison

## Ronald D. Hatfield

Research Plant Physiologist

Phone: (608) 890-0062

E-Mail: ronald.hatfield@ars.usda.gov

BS: Secondary Education (Science), 1973, Kansas State University  
MS: Botany-Plant Physiology, 1982, Iowa State University  
PhD: Botany-Plant Physiology, 1985, Iowa State University

### Current Research

- Identifying cell wall factors limiting digestibility and forage utilization in sustainable dairy farming.
- Designing forage plants with enhanced value for dairy production, profitability, and sustainability.
- Identifying cross-linking mechanisms that limit cell wall energy conversion efficiency.

[Link to scientist's current research results.](#)



Marshfield

## Bill Jokela

Research Soil Scientist

Phone: 715-384-5954

E-mail: bill.jokela@ars.usda.gov

BA: Biology, Carleton College, Northfield, MN  
MS: Soil Science, 1978, University of Minnesota  
PhD: Soil Science, 1985, University of Minnesota

### Current Research

- Improving dairy manure management to improve crop nutrient utilization and minimize adverse environmental impacts.

[Link to scientist's current research results.](#)



Madison

## Richard E. Muck

Agricultural Engineer

Phone: (608) 890-0067

E-Mail: richard.muck@ars.usda.gov

BS: Agricultural Engineering, 1971, Cornell University  
MSE: Environmental Engineering, 1973, Purdue University  
PhD: Agricultural Waste Management, 1978, Cornell University

### Current Research

- Improving nutrient digestibility to enhance forage utilization in lactating dairy cow feeding systems.
- Redesigning forage germplasm and production systems for efficiency, profit, and sustainability of dairy farms.
- Value-added products from forages and biomass energy crops.
- Integrated feedstock supply systems for corn stover biomass.
- Silage quality and losses as affected by silo type.

[Link to scientist's current research results.](#)



Madison

## J. Mark Powell

Research Soil Scientist, Agroecologist

Phone: (608) 890-0070

E-Mail: mark.powell@ars.usda.gov

BS: Plant Science, 1979, Clemson University  
MPS: International Agriculture/Soil Fertility, 1982, Cornell University  
PhD: Agronomy, 1989, Texas A & M University

### Current Research

- Interdisciplinary research in soil, crop and animal science using an agroecological approach to understand whole-farm nutrient cycling and to develop integrated production systems that sustain natural resources and profitable livestock production.

[Link to scientist's current research results.](#)



Madison

## Heathcliffe Riday

Research Geneticist

Phone: (608) 890-0077

E-Mail: heathcliffe.riday@ars.usda.gov

BS: Conservation Biology, 1997, Brigham Young University  
MS: Agronomy-Plant Breeding, 2001, Iowa State University  
PhD: Agronomy-Plant Breeding, 2003, Iowa State University

### Current Research

- Designing forage plants with enhanced value for dairy production, profitability, and sustainability.
- Breeding and genetics of forage legumes for dairy production use in hay, silage, and grazed pasture systems.
- Traits of interest: biomass yield, forage quality, persistence, grazing tolerance, competitiveness in grass-legume mixtures, seedling vigor, frost-seeded establishment.

[Link to scientist's current research results.](#)

More scientists on next page.



## Milwaukee

### Brian Shepherd

Research Physiologist (Fish)

Phone: (414) 382-1767

E-mail: brian.shepherd@ars.usda.gov

BS: Zoology, 1990, University of Hawaii at Manoa  
PhD: Zoology, 1997, University of Hawaii at Manoa

#### Current Research

- Understanding and improving growth in yellow perch to increase aquaculture productivity and profitability.

[Link to scientist's current research results.](#)



## Madison

### Michael Sullivan

Research Molecular Geneticist

Phone: (608) 890-0046

E-Mail: michael.sullivan@ars.usda.gov

BS: BSChem, BS Molecular Biology and Biochemistry, 1985, Purdue University  
PhD: Cell and Molecular Biology, 1991, University of Wisconsin– Madison

#### Current Research

- Designing forage plants with enhanced value for dairy production, profitability, and sustainability.

[Link to scientist's current research results.](#)



## Madison

### Peter Vadas

Research Soil Scientist

Phone: (608) 890-0069

E-Mail: peter.vadas@ars.usda.gov

BS: Crop and Soil Environmental Sciences, 1993, Virginia Tech  
MS: Soil Science, 1996, University of Delaware  
PhD: Soil Science, 2001, University of Delaware

#### Current Research

- Integrating physical and socioeconomic assessments of dairy farms and systems to maximize production and profit and minimize adverse environmental impacts.
- Modeling nutrient loss from agricultural soils, surface-applied manures, and fertilizers to the environment.

[Link to scientist's current research results.](#)



## Prairie du Sac

### Richard P. Walgenbach

Research Agronomist and Farm Manager

Phone: (608) 643-2438 or 264-5138/9, ext. 223

E-Mail: richard.walgenbach@ars.usda.gov

BS: Agronomy, 1973, University of Wisconsin–Madison  
MS: Agronomy, 1976, University of Wisconsin–Madison  
PhD: Agronomy, 1980, University of Minnesota–St. Paul

[Link to scientist's current research results.](#)



## Madison

### Paul J. Weimer

Research Microbiologist

Phone: (608) 890-0075

E-Mail: paul.weimer@ars.usda.gov

BS: Biology, 1973, Carroll College  
MS: Bacteriology, 1975, University of Wisconsin-Madison  
PhD: Bacteriology, 1978, University of Wisconsin-Madison

#### Current Research

- Microbial population dynamics in the rumen and its relationship to dairy performance.
- Microbial degradation of fiber by ruminal microbes.
- Conversion of perennial forages and crop residues to fuels and chemicals.

[Link to scientist's current research results.](#)



## Madison

### Wayne E. Zeller

Research Chemist

Phone: (608) 890-0071

E-mail: wayne.zeller@ars.usda.gov

BA: Biology, Chemistry, Mathematics, 1978, Westmar College  
PhD: Chemistry, 1985, University of Nebraska-Lincoln

#### Current Research

- Investigation of lignification processes leading to improved digestibility of dairy forages.
- Investigation of tannins to improve nitrogen use efficiency in dairy production.
- Development of novel analytical techniques for forage analysis.
- Product development of bioenergy fermentation residues.

[Link to scientist's current research results.](#)

