

Charles Gerba Elected as Fellow of AAAS

Charles P. Gerba, professor of soil, water and environmental science, and microbiology and immunology, was elected as a Fellow by the American Academy for the Advancement of Science (AAAS) in December 2008. AAAS awarded this honor to 486 members last year because of their scientifically or socially distinguished efforts to advance science or its applications. Election as a fellow is an honor bestowed upon AAAS members by their peers.

Gerba was elected for his distinguished contributions to the field of health-related water microbiology and environmental microbiology. He has extensively researched the detection, concentration and movement of critical bacterial (*Cryptosporidium* and *Microsporidia*) and enteric viral pathogens in water. He also has played a significant role in understanding how infectious diseases are transmitted through the environment and how to control them, in a time when infectious disease remains the leading cause of death and disability worldwide, according to the Centers for Disease Control and Prevention.

Gerba has been a leader in developing the field of quantitative microbial risk

assessment to better understand the risk of pathogens in environments. His work in this area was adopted by the Food and Agriculture Association and was used by the Environmental Protection Agency to set standards for surface water treatment in the United States.

In addition, he has contributed to the development of more effective disinfectants. For example, he was the first to demonstrate that low levels of copper and silver in water killed *Legionella pneumophila*. As a result, over 100 hospitals in the United States now use copper and silver to control *L. pneumophila* in their water supplies.

Widely known as “Dr. Germ,” Gerba has become the nation’s expert on domestic and public hygiene. He has brought the field of microbiology to center stage, fulfilling requests to discuss his research on “Dateline,” “48 Hours,” “Today,” “20/20” and “Good Morning America.” He believes in sharing scientific evidence with the public in a user-friendly manner, providing simple tips that people can implement to minimize bacteria in homes, workplaces and other public areas. He has also advised more than 80 graduate students and greatly influenced the training of environmental microbiologists.



Founded in 1848, AAAS is the world’s largest general scientific society, and publisher of the journal *Science*. The tradition of AAAS fellows began in 1874. AAAS includes some 262 affiliated societies and academies of science, serving 10 million individuals. *Science* has the largest paid circulation of any peer-reviewed general science journal in the world, with an estimated total readership of one million.

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Russell Tronstad Designated UA Distinguished Outreach Professor

By Alexis Blue, University Communications

Russell Tronstad wasn’t much older than his 12-year-old son when he was operating heavy equipment on his family’s Montana ranch. Years

later, he’s taken his farming and ranching background to a whole new and modern level, developing online tools to aid with livestock management and crops marketing.

Tronstad received one of The University of Arizona’s Distinguished Faculty Outreach Professor Awards at the UA’s winter commencement in December 2008. The award recognizes faculty members who have significantly contributed to the University’s outreach mission through scholarship-based outreach to the state, nation and world. It includes the honorary title and a \$5,000 base salary increase.

Since joining the UA in 1989, Tronstad, a professor and specialist in the department of agricultural and resource economics, has led numerous research and outreach projects and co-authored several publications to aid farming and ranching communities, particularly in rural Arizona.

His recent research undertakings include a study, conducted with a graduate student, on

the costs of illegal immigration on Arizona’s border ranches—including fence repairs, litter cleanup and livestock losses—and a study on trade flow between Arizona and Sonora, Mexico.

Tronstad also has worked to take the enduring trades of farming and ranching to the Web, with the development of Web sites to support ranchers and farmers.

One of those sites, www.livestockrecords.arizona.edu, aids ranchers in livestock identification, monitoring, record keeping and other issues, a key focus of much of Tronstad’s work. Another, www.farmdirectory.org, helps small local farmers market their crops directly to consumers through an interactive site that includes listings of products, farmers’ markets or other events and information.

“As a land-grant university, it (outreach) is part of our job,” said the head of the agriculture and resource economics department, Gary Thompson, who nominated Tronstad for the award. “But Russell has gone far beyond the expectations as far as reaching out to the community.”

In the future, Tronstad said he hopes to work more with tribal farming communities



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to help them develop programs to sell their crops and farm experiences to tourists. Arizona’s tribal agriculture is focused on the long term, whereas non-tribal agriculture near urban areas tends to be more focused on the real estate market than agriculture.

Tronstad is also interested in technological advances in crop production techniques. He is currently working with plant sciences researchers on the economic viability of grafting melons to reduce the use of fungicides applied to the soil.

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