

**Ralstonia Bacteria, a Select Agent, Disrupts Geranium Market**

*By Jim Writer, Plant Protection and Quarantine*

Geraniums, America's number one bedding plant, are a symbol of winter's thaw and the coming spring. With splashes of bright red, milky whites, and nearly every hue in between, they appear on nursery yards as days lengthen and warmth returns to the air.

In early 2003, these hardy annuals were a harbinger of something else. In mid-winter, one of the large importers of geraniums contacted PPQ personnel to let them know that, this year, the plants might carry more than pretty flowers. Several cuttings from seven of 500,000 mother plants at the importer's Kenyan production facility showed signs of bacterial wilt. Testing revealed the presence of a bacterium not known to occur in the United States.

The company had already shipped an unknown number of infected cuttings to two large rooting stations in the United States. There they were grown into small plants and sold to wholesale and retail nurseries throughout the country.

Within days of when the company notified PPQ, plants in



*A geranium at a Wisconsin greenhouse shows the classic signs of bacterial wilt caused by Ralstonia solanacearum race 3 biovar 2. Photo from Wisconsin Department of Agriculture used with permission.*

Indiana, Illinois, Michigan, and Wisconsin were tested and confirmed positive for the bacteria.

To complicate matters, the organism isolated in Kenya was *Ralstonia Solanacearum* race 3 biovar 2 (RSr3b2), a threat to geraniums and a major potential threat to the U.S. potato industry.

USDA has included the pest on its Select Agent list meaning that RSr3b2 can be considered a potential bioterrorism weapon.

Over 80 percent of the geraniums sold in the United States begin their lives as cuttings off mother plants in production greenhouses in Kenya, Guatemala, Costa Rica, and a few other countries. Most arrive unrooted (not in soil) going first to rooting stations to be planted in soil and to mature a bit before heading to market.

While the industry has established strict sanitary practices to prevent infection with *Ralstonia* and other bacteria, *Ralstonia*-

infected geraniums made their way to the United States in 1995, 1999, and 2000. These previous outbreaks were handled by the industry with PPQ notified after the fact, if at all. In 2003, PPQ was notified early of the possibility of a serious problem.

On Valentine's Day, the United States halted importation of geraniums from Kenya. Using lists of customers from the two U.S.-based rooting stations that received potentially infected cuttings, PPQ began placing emergency hold notices on over 900 wholesale and retail nurseries in 47 states. Initial actions involved the issuance of a Federal Emergency Action Notification or State Stop Sale Order (depending on who got to the nursery first) to any establishments that received suspect plant shipments.

The hold notices prohibited the sale and distribution of identified suspect geranium plants, commingled host and non-host plants, and associated regulated articles such as pots and soil. State or Federal agricultural officers had to visit each of the 900 facilities.

Meanwhile, PPQ's Pest Detection and Management Programs staff finalized an action plan to guide the PPQ and State response to the introduction.

Dr. Matt Royer of the Pest Detection and Management Programs staff was designated as the incident command manager in PPQ headquarters. Over the next several months, his office was the scene of

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**Inside APHIS Editorial Board:**

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## PPQ Unit Receives Certification from ISO

The Biological and Technical Services (BTS) unit of Plant Protection and Quarantine (PPQ) has received certification from ISO (the International Organization for Standardization) for its permitting system for plants and plant products processes.

ISO is a network of the national standards institutes of 147 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, which coordinates the system. The ISO stamp of approval is highly valued by businesses and governments throughout the world.

"When a permit is issued through a process system certified by ISO," said PPQ's Deputy Administrator Ric Dunkle, "people know that it has been issued with the highest standards in mind. That results in increased confidence from the public and from our trade partners."

Mike Firko, the head of BTS, noted that the ISO certification was originally designed for business processes. "PPQ was a pioneer in applying for ISO certification," he noted. "Initially, very few government agencies applied."

The certification is not easy to get. It took one and one-half years for BTS to receive certification for its permitting system—and resting on one's laurels is not an option. In order to maintain the certification, BTS must successfully undergo both internal and external surveillance (by an outside contractor) audits every 6 months.

Both Dunkle and Firko made their remarks at a formal ceremony at Riverdale in August 2003, in which individuals were presented certificates for their part in helping BTS achieve the ISO certification. Deborah Knott, chief of the permit

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(front row, l-r): Deborah Knott, Cheron Staples, Karen Brady, Nancy Heffernan, Rick Dunkle; (middle row, l-r): Doris Smith, Carolyn Fitzgerald, Kimberly Nichols, Bonita Davis; (back row l-r): Lillian Stewart, David Hanken, Gail Jennings, Mike Firko. Photo by Bernie Yee.

## APHIS Employee Works with Fidos for Freedom

*By Angela Rectenwald, Legislative and Public Affairs*

Frankie is outgoing, in good shape, and has a very active lifestyle. He enjoys playing Frisbee in the park, and his main goal in life is to have fun. Frankie has red hair and big brown eyes. He also has a respectable career and takes his responsibilities seriously. His friends say he is just a big teddy bear, and he never stops wagging his tail.

Frankie never stops wagging his tail because he is a dog. Frankie is a golden retriever and has a career working as a service dog. A service dog is a canine trained to help a physically disabled person by assisting in life's daily routine tasks, greatly reducing or eliminating the need for a human attendant.

Frankie has been lucky enough to be trained by Gretchen Strecker who works for Marketing and Regulatory Programs Business

Services as a budget analyst for APHIS in Riverdale, MD. Frankie attends work every day with Gretchen and goes wherever she goes, including meetings and even on travel.

The tasks a service dog can assist with are quite astonishing. For example, Frankie is being trained to assist someone in a wheelchair. According to Strecker, his full-time trainer, Frankie can pull a wheelchair, retrieve objects, carry objects, turn lights on and off, open refrigerators, assist in getting undressed, open doors, travel in a car, and even travel on airplanes.

According to the Census Bureau, about 15,000 service dogs are in the United States. Dogs can be trained to assist people who are blind, deaf, or hard of hearing, or even for a person with epilepsy.

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Strecker and Frankie are part of an organization called Fidos for Freedom Inc., which is based out of Laurel, MD. Frankie's training is paid for and sponsored by the Great Falls Kid Care Club, which conducted fundraisers and raised money for him.

Frankie started his training when he was just a puppy with Strecker. "You start them when they are young and giggly and bouncy, and then you teach them how to use their nose, their mouth, and their paws, and to use them all at once," said Bob Phillips, founder of Canine Heroes, an organization similar to Fidos for Freedom Inc.

During the first year of Frankie's training, he learned basic obedience and skills. Trainers teach the puppies how to retrieve toys, listen to commands, and play games like tug of war.

After one year of a dog's learning the basics, the trainer helps the dogs to build upon the skills they already know and turn them into useful skills for someone who is disabled. For example, instead of playing tug of war with a rope, they learn how to tug and pull a wheelchair or open a refrigerator.

After 2 years of training the dog is ready to go to work. The types of dogs that are the best for this program are Labrador retrievers, golden retrievers, poodles, and some herding breeds.

In order to find the right match between a canine and a human, experts watch the dogs interact with people with disabilities. They watch to see which pairs click and seem to get along the best. In a very real sense, the dogs choose their partners as much as the disabled choose their dogs.

"Dogs will be fairly indifferent to most people and pick one, and say 'That's the person I'll work for,'" said Strecker.



*Frankie (center) with some friends. Lucy (foreground) is trained to help those with hearing impairments. Gracie (back right) is in training as an assistant dog.*

While the assistance dogs are on duty, they are required to wear a harness that says, "Please don't pet me. I'm working." Even when Frankie is at home and being a normal happy puppy rolling around in the grass, if Strecker drops something on the floor, Frankie is right there wagging his tail and picking it up for her.

"It is amazing how they never truly disconnect. They want to help

you with anything they can," said Strecker.

It takes a certain type of dog to do this. The first 2 years of training is a test to see if the dog has what it takes. If they don't, they are released from the program.

"It is just like people; if you don't have a good work ethic or if you have a bad attitude, then you get fired," said Strecker.

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## New ExCEL Program Promotes Success

Since June 1998, over 140 APHIS employees have taken advantage of a unique development opportunity open to those in administrative and support functions throughout the Agency. The Training and Development Branch (TDB) of Employee Services Division (ESD) sponsors an annual skills building program called New ExCEL (Expanding Competencies through Empowerment and Learning), which promotes continual learning opportunities for field and headquarters support employees representing every program unit of APHIS in grades GS-2 through GS-7.

The 21 participants of Class 7, which started in April 2003, are in the process of constructing their Learning Contracts and identifying their career development learning objectives to be completed during the 12-month program with the guidance of their supervisor and their assigned program mentor.

One particularly strong element of the program is that each participant has a mentor. Most all of the mentors are graduates from previous classes of the New ExCEL Program who willingly and enthusiastically volunteer to promote the success of fellow administrative and support staff employees of APHIS. One current mentor, Pamala Hanson, a secretary with Plant Protection and Quarantine in Seattle, WA and a graduate of Class 5, describes the program as "a life altering experience for me."

"I learned so many new skills during the 12-month program," she noted, "and it opened up many new doors for me in my professional as well as my personal life."

Another strong aspect of the New ExCEL Program is the networking. Not only do the participants get to know one another well through the week-long classroom training during orientation and again during graduation, but participants also reach out to

each other through the specially designed discussion database, commonly called the electronic "chatroom." A graduate of Class 5, Dawn Miles, a computer assistant with Wildlife Services in Phoenix, AZ, states, "I always knew that my classmates were there for me any time I needed resources or just a good listener. While growing with the sharing of ideas and challenges, we all grew in strength of character, knowledge, performance – in all aspects of life toward a more productive work environment to a more balanced personal and professional life."

Through the class, the student and his or her supervisor develops, with the help of others in the new ExCEL program, an individually tailored learning contract. Each participant is allocated funding that they can use in any way that the participant and the supervisor feel will benefit his/her learning. This way the training received is directly applicable to each participant's needs, which have been identified through an assessment instrument.

Gail Jones, a management assistant with MRPBS, ESD, in

Riverdale, MD, a graduate of Class 1 and a former mentor states, "The program helped me to see the job arena in a different light. APHIS employees are out there to help you in your career development and the New ExCEL Program affords you the opportunity to meet people from all walks of life. The program taught me to prioritize goals so they are realistic and I find myself drawing upon these training resources everyday."

TDB employee, Margie Trunzo, who was the original creator of the New ExCEL Program, feels very close to the programs' graduates and the important support roles they play in APHIS. She reflects, "Having 'come up through the ranks' of APHIS myself from a GS 2 to GS 13, I feel that as we progress, it's important to give something back to the Agency and to extend a helping hand toward the career development of others. After all, it's not what you take that matters, it's what you leave behind."

With that thought, Margie retired on May 31, 2003, after 30 years of service to USDA. She truly practiced what she taught!

## Essie Schreck Retires After 33 Years with USDA

After working more than 50 years with the Federal government, 33 of which was with the United States Department of Agriculture (USDA) in Savannah, GA, Essie Schreck retired, in July 2003, at the age of 84.

The valedictorian of her high school class, Mrs. Schreck began her government career as a junior clerk stenographer in 1941 for the Department of Defense at Hunter Field, the Savannah Municipal Airport. In 1946, she started work with the Communicable Disease Center (now known as the Centers for Disease Control and Prevention) on Oatland Island near Savannah.



In 1969, she began her career with USDA's Plant Protection and Quarantine at the Savannah port.

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## Ralstonia Bacteria

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nearly daily conference calls with the PPQ regions, the Center for Plant Health Science and Technology, and others. Matt also handled what must have seemed like an unrelenting stream of phone calls and e-mails from State and Federal officials, the Society of American Florists, growers, journalists, and Congress.

The first task for the response team was tracking the potentially infected plants. Inspectors looked for wilted plants in nurseries.

Samples were collected and shipped off to State, university, or private laboratories for the first round of testing. At these labs, the bacteria was identified to the species level – was it *Ralstonia solanacearum* or not? If yes, samples were sent on to PPQ's National Plant Germplasm and Biotechnology Laboratory in Beltsville for further testing to determine if it was race 3 biovar 2, and therefore, the specific pest of interest. (*Ralstonia solanacearum* comes in many variations, designated by race and biovar, but only race 3 biovar 2 is of concern).

RSr3b2's select agent status had the most impact on the laboratory testing part of the PPQ response. Because of the need to keep the bacteria out of the wrong hands, laboratories and other facilities had to get a USDA-issued permit to possess it. The potentially lengthy process (because of security and safeguarding requirements) of obtaining such a permit negated that option. Only the Beltsville laboratory had the necessary tools and approval to identify RSr3b2. The entire burden for confirming the presence of RSr2b3 fell entirely on laboratory director Laurene Levy and her staff. Laurene and her staff put the Beltsville laboratory

into 24-hour, 7-day-a-week operation, which included detailing additional scientists to the facility.

Due in large part to the State-Federal multi-step testing scheme and the variable quality of some samples, turn-around time on samples stretched out longer than initially anticipated.

In many cases, people's livelihoods depended on test results. Because almost all of its plants were on a re-circulating water system, one nursery lost nearly its entire stock of more than 500,000 greenhouse plants. Nursery owners had the option of destroying shipments of potentially infected geraniums, along with other plants that may have become infected, based on the presence of wilt or the identification of the *Ralstonia* bacteria at the species level. They could also wait for the confirmatory testing done in Beltsville to identify the bacteria as RSr3b2. If the owners chose to wait, they had to maintain the crop. If RSr3b2-negative, the crop could be sold but if positive it had to be destroyed.

Early in the PPQ response, the affected growers could opt for destroying plants displaying symptoms of wilt, all plants within a 1-meter radius, and other plants that may have been exposed through shared water supply or other mechanisms. Based on several factors, with the most critical being the overwhelming need to eradicate the pest before it could establish itself, program managers decided to recommend destruction of an entire shipment if it contained any infected plants. This decision was not made lightly; program managers were very aware of the significant potential economic impact on the affected growers.

The number of nurseries held under the emergency action notification diminished as investigators determined that they did not receive a suspect shipment, the potentially infected stock was destroyed, or the plants remained free of symptoms over a combination of time and temperature that should have resulted in infected plants showing symptoms. The last nursery was released on May 8, almost three months after the initial holds were placed. During that time, 127 facilities in 27 States were found to have RSr3b2-infected geraniums and two million plants were destroyed.

As the seriousness of the situation lessened, PPQ and the geranium industry quickly acted to prevent a reoccurrence. A series of meetings were held in Riverdale, MD, to review the response to the RSr3b2 introduction and to look ahead at strategies for preventing future ones and responding to a broader introduction involving other commodities.

A key element in preventing a repeat introduction is a joint PPQ-geranium industry effort to develop a pre-certification program, including more stringent rules for the sanitary production of geraniums at foreign production facilities. The program is scheduled to be in place for the 2003/2004 season. The goal is to prevent the infection of plants at these off-shore facilities and eliminate the risk of imported plants carrying the disease to the United States.

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All of the trainers who work for this program are unpaid volunteers. The dogs stay with their trainers 24 hours a day and go wherever they go. Trainers attend weekly classes to learn how to train the dogs properly. After 2 years of training a dog, the trainer gives them to a person with a disability.

"It will be hard to let Frankie go, because we have developed such a close bond," said Strecker. "But knowing the happiness and help that he will be bringing to someone else's life, makes it all worth it."

Many of the dogs that are brought into the organization are rescued from local animal shelters, or donated by people who can't take care of them. "Our dogs are a breed apart," said Phillips of Canine Heroes, "We ask them to do something incredible and wonderful and they do it. And not only do they do the challenging job of guide work, they connect people, they connect staff, donors, volunteers, graduates and dog lovers. They offer their happy wags to people who didn't even realize they needed some canine compassion. They bring smiles to our faces and warmth to our hearts."

Service dogs are admitted to everywhere a person can go with permission of the United States Government. According to the Americans with Disabilities Act (ADA), businesses that provide goods or services to the general public must allow people with disabilities to bring their service animals into any areas that other customers are allowed. As a result, individuals with disabilities are able to obtain equal employment and full access to the same goods, services, facilities and privileges as others.

Unfortunately, with all the benefits and opportunities that service dogs can bring to the disabled, only a small number of

people have them. According to a study done at the University of Arizona, over 157 million Americans or one in every five suffer from a disability, yet only .009 percent of them have a service dog. The reason for this is that the public does not have knowledge or access to information about these opportunities.

Frankie is close to finishing his training. He has been matched with

a client and has begun his next phase of training, which is one-on-one work with the client. Frankie will soon be going on to be someone's service dog, and their unconditional best friend. As Strecker said, "Life is easier with a good friend by your side."

For more information about Fidos for Freedom go to [www.fidosforfreedom.org](http://www.fidosforfreedom.org).

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## PPQ Unit

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services branch, helped Dunkle and Firko present the certificates.

Those receiving certificates were Karen Brady, Bonita Davis, Carolyn Fitzgerald, Gail Jennings, Kimberly Nichols, Lillian Stewart, Doris Smith, Cheron Staples, David Hanken, and Nancy Heffernan.

*\*Because "International Organization for Standardization" would have different abbreviations in*

*different languages ("IOS" in English, "OIN" in French for Organisation internationale de normalisation), the organization decided to use a word derived from the Greek isos, meaning "equal."*

*Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.*

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## Essie Schreck Retires

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During her 33 years there, the port directors or officers in charge were Victor Durham, Henry Pruitt, John Patton, Arthur Miller, David Holman, Frank Krainin, and Stephen Davis. She served under 11 Secretaries of Agriculture: Orville Freeman, Clifford Morris Hardin, Earl Lauer Butz, John Albert Knebel, Bob Bergland, John Rusling Block, Richard Edmund Lyng, Clayton Yeutter, Edward Madigan, Mike Espy, Dan Glickman, and Ann Veneman.

In March 2003, she was reassigned to the new Department of

Homeland Security, where she worked until she retired in July 2003. "I thoroughly enjoyed working," she says, "but Father Time and my health started talking to me, and I knew I had better listen."

Her first planned activity after retirement was to give her house a thorough cleaning. After that, though, she plans to return to one of her former alma maters, Armstrong Atlantic State University, to get the education she needs to open her own business.

**Note:** This newsletter contains selected stories from the more complete online version. To view the online version, go to the APHIS home page ([www.aphis.usda.gov](http://www.aphis.usda.gov)), click on "About APHIS," and then on "Inside APHIS" (in the column on the far left).

E-mail questions, comments, and suggestions for stories to the editor ([Caffilene.Allen@aphis.usda.gov](mailto:Caffilene.Allen@aphis.usda.gov)).