Combating the Deadly Effects of Salmonella with Salmogenics™

Abstract:

This document addresses the economic and environmental benefits of the Salmogenics[™] vaccine.

Updated: October 2014

Combating Salmonella Bacteria with Salmogenics™

According to the Centers for Disease Control (CDC), the incidence of Salmonellosis (i.e. 16.2 cases per I00,000 population/year) was the least improved of all foodborne pathogens in terms of achieving national health objective targets for Healthy People 2010 (CDC, 2008). According to the USDA Economic Research Service, poultry is the fastest growing meat product in the U.S. organic market with a market size estimated to be around \$56 million and annual growth estimated to be 33% through 2008 (USDA, 2008). The number of USDA-certified organic broiler birds increased from 2 million in 2000 to over 10 million in 2005 (USDA, 2006).¹

According to the National Chicken Council, "in 2011 approximately 9 billion broiler chickens, weighing 50 billion pounds, liveweight, will be produced. Almost 37 billion pounds of chicken will be marketed, measured on a ready-to-cook basis."

Salmonella causes about 1.2 million cases of food poisoning each year. Its victims are most likely to be 5 or younger, adults older than 65, and individuals with impaired immune systems. Infections from *Salmonella*, which can be deadly, result in \$365 million in direct medical costs each year, according to the CDC.²

Salmonella Costs \$3 Billion a Year in the U.S.

According to the World Health Organization, which last compiled data in 2005, *Salmonella* in the U.S. accounts for 168,000 hospital visits, 15,000 hospitalizations, and 580 deaths each year. That's a public health burden estimated to reach an annual cost of \$3 billion. Few other countries report on the cost of treating illnesses such as bacteria, but the WHO reports that millions of cases are reported around the world each year, resulting in thousands of deaths. The cost estimate is largely driven by the number of premature deaths followed by average cost of hospitalization.

The Global Green Advantage

Global Green, Inc. intends to manufacture through third parties, market and sell its exclusive U.S. patented vaccine, Salmogenics Vaccine, to domestic markets. Salmogenics[™] helps to combat the dangerous effects that Salmonella bacteria produces in animals and human beings.

The vaccine is unique in that it is injected directly into the egg, before the chick is formed, improving the immune system, health and welfare of the chicken, and providing a healthier source of protein for humans in a cost effective manner.

Salmonella intervention strategies should be implemented during the hatching phase as Salmonella bacteria have been found almost everywhere, including in breeder nest boxes, egg-storage rooms, hatchery trucks and in the hatchery itself, according to The University of George College of Agricultural and Environmental Sciences, 2007.

Bacteria can spread on the shell of fertilized eggs. In rare cases, they may penetrate the shell and reside just beneath its inner surface.

Impact of Foodborne Diseases

Foodborne diseases cause approximately 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths a year in the United States, according to the CDC. The estimates vary because only a small percentage of cases are reported to public health officials.³ The 24 hour stomach bug most of us call the flu is not influenza, which lasts a week or more, but is a mild food poisoning, usually from some common bacterium like *Salmonella*.

The CDC released a report card on foodborne illnesses issued by FoodNet, known for tracking food and safety trends. Out of all of the infections tracked, FoodNet 2010 data showed a lack of progress in reducing infections caused by Salmonella. Salmonella was the most common infection (1.2 million U.S. illnesses annually) and the most common cause of hospitalization and death tracked by FoodNet. In 2010, the incidence of Salmonella was nearly three times the 2010 national health objective target. Salmonella can contaminate a wide range of foods, with poultry being at the top of the list. There are many different types of Salmonella, and each type tends to have different animal reservoirs and food sources, making control challenging.

In 2012, the Emerging Pathogens Institute ranked Salmonella number one as the most dangerous foodborne pathogen. This bacteria was the greatest public health burden on our country, the leading cause of food poisoning hospitalization, and the number one cause of food-related death. The CDC reported that for every case of Salmonella reported, 29 cases are not diagnosed

Salmonella Enteritidis is one of the most prevalent foodborne pathogens. In March 2013, ThePoultrySite.com reported that researchers at the University of Agronomical Sciences and Veterinary Medicine of Bucharest in Romania and the University of Liege in Belgium reported as the concern grows over the increase in human salmonellosis cases, the need for an application of preventive methods either at the farm level or during the processing steps is crucial to better control Salmonella foodborne outbreaks.

Federal officials studying recent CDC data could not say with certainty why Salmonella is such a stubborn threat. But in addition to it being stubborn, it is also pervasive. The bacteria can turn up in foods from poultry to peanuts. "We think the major reason is the very large number of products that can be contaminated with *Salmonella*," CDC Director Thomas R. Frieden said.

What is Salmonellosis

Salmonellosis is a type of food poisoning caused by the *Salmonella* bacterium. There are many different kinds of these bacteria. *Salmonella* serotype Typhimurium and *Salmonella* serotype Enteritidis are the most common types in the United States.

Every year approximately 40,000 cases of salmonellosis are reported in the U.S. Many milder cases are not diagnosed or reported, so the actual number of infections may be 30 or more times greater.⁴ Salmonellosis is more common in the summer than in the winter. Although the prevalence of *Salmonella* infections is highest in children, salmonellosis outbreaks are common among individuals who are institutionalized and

residents of nursing homes. Young children, older adults, and people who have impaired immune systems are most likely to have severe infections.

What Causes Salmonellosis

Salmonella live in the intestinal tracts of humans and other animals, including birds. Salmonella are usually transmitted to humans by eating foods contaminated with animal feces. Contaminated foods usually look and smell normal. Contaminated foods are often of animal origin, such as beef, poultry, milk, or eggs, but any food, including vegetables, may become contaminated. Thorough cooking kills Salmonella. Food may also become contaminated by the hands of an infected food handler who did not wash his hands properly after using the bathroom.

Salmonella may also be found in the feces of some pets, especially those with diarrhea, and people can become infected if they do not wash their hands after contact with pets or pet feces. Reptiles, such as turtles, lizards, and snakes, are particularly likely to harbor *Salmonella*. Many chicks and young birds carry *Salmonella* in their feces.

Everyone should always wash their hands after handling a reptile or bird.

Individual Precautions to Prevent Salmonellosis

There is no vaccine to prevent salmonellosis, according to the CDC. Because foods of animal origin may be contaminated with *Salmonella*, people should not eat raw or undercooked eggs, poultry, or meat. Raw eggs may be unrecognized in some foods, such as homemade Hollandaise sauce, Caesar and other homemade salad dressings, tiramisu, homemade ice cream, homemade mayonnaise, cookie dough, and frostings. Poultry and meat, including hamburgers, should be well-cooked, not pink in the middle. Persons also should not consume raw or unpasteurized milk or other dairy products. Produce should be thoroughly washed.

Cross-contamination of foods should be avoided. 40 percent of individuals do not separate raw from ready-to-eat foods, and almost half use the same cutting boards for raw poultry and produce, according to a 2011 survey by the International Food Information Council Foundation, a public education group.

Uncooked meats should be kept separate from produce, cooked foods, and ready-to-eat foods. Hands, cutting boards, counters, knives, and other utensils should be washed thoroughly after touching uncooked foods.

People who have salmonellosis should not prepare food or pour water for others until their diarrhea has resolved. Many health departments require that restaurant workers with *Salmonella* infection have a stool test showing that they are no longer carrying the *Salmonella* bacterium before they return to work.

Reptiles (including turtles) are particularly likely to have *Salmonella*, and it can contaminate their skin. They are not appropriate pets for small children and should not be in the same house as an infant. *Salmonella* carried in the intestines of chicks and ducklings contaminates their environment and the entire surface of the animal. Children can be exposed to the bacteria by simply holding, cuddling, or kissing the birds. Children should not handle baby chicks or other young birds.⁵

Hand washing is critical in stemming the spread of the disease, and should be done particularly in the following instances:

- 1) not only before handling food, but also between handing different food items,
- 2) after handling reptiles,
- 3) after touching birds, including baby chicks and ducklings,
- 4) after touching the environment of birds or reptiles.

Additional Disease Prevention Steps

It is important for the public health department to report know about cases of salmonellosis. It is important for clinical laboratories to send isolates of *Salmonella* to the City, County, or State Public Health Laboratories so the specific type can be determined and compared with other *Salmonella* in the community. If many cases occur at the same time, it may mean that a restaurant, food or water supply has a problem that needs correction by the public health department.

Some prevention steps occur everyday without the public even thinking about it. Pasteurization of milk and treatment of municipal water supplies are highly effective prevention measures that have been in place for decades. In the 1970s, small pet turtles were a common source of salmonellosis in the United States, so in 1975, the sale of small turtles was banned in this country. However, in 2008, they were still being sold, and cases of *Salmonella* associated with pet turtles have been reported. Improvements in farm animal hygiene, in slaughter plant practices, and in vegetable and fruit harvesting and packing operations may help prevent salmonellosis caused by contaminated foods. Better education of food industry workers in basic food safety and restaurant inspection procedures may prevent cross-contamination and other food handling errors that can lead to outbreaks. Wider use of pasteurized egg in restaurants, hospitals, and nursing homes is an important prevention measure. In the future, irradiation or other treatments may greatly reduce contamination of raw meat.

Control of Salmonella Infection in Chickens

Today, one chicken in three contains Salmonella enteritidis⁶, a pathogen that lives in the intestinal tracts of birds and other animals and can easily spread. It can cause diarrhea or severe disease and death. Invisible, tasteless and odorless, it doesn't make the chickens sick. But transferred to humans, it can lead to salmonellosis — an infection that causes diarrhea, fever and stomach cramps, and, in severe cases, can spread from the intestines to the bloodstream.⁷

The combination of the below points provides a series of "hurdles" to minimize the risk of *Salmonella* infection:

- 1. Start with chicks known to be Salmonella-negative
- 2. Monitor the flock for Salmonella infection
- 3. Take appropriate action in cases of Salmonella outbreaks
- 4. Effective biosecurity
- 5. Maximize the protective mechanisms of the individual birds.
 - vaccination
 - optimization of the intestinal flora

Every step of the farm to market process presents opportunities for *Salmonella* infection as outlined in the following paragraphs.

<u>The Farm</u>

Food safety experts and poultry scientists say that *Salmonella* control must start on the farm, but the federal Agriculture Department's Food Safety and Inspection Service lacks the legal authority to test for *Salmonella* on farms or to require farmers to have a food safety plan.

As a result, attempts to prevent *Salmonella* are done voluntarily by farmers or because poultry processing companies ask them to — leading to a patchwork of efforts, some of which work better than others.

For instance, vaccinating the hens used in breeding can reduce — but not eliminate — the incidence of *Salmonella* in their offspring, researchers found by testing chickens before slaughter. Researchers at the University of Georgia in a study published in 2010 found that 20 percent of chicks hatched from vaccinated breeders tested positive for *Salmonella* before slaughter, compared with 30 percent of chicks from unvaccinated hens. And research published this year by the same group found that if a vaccinated chicken is contaminated with *Salmonella*, it will have, on average, 50 percent fewer cells of the bacteria than an unvaccinated bird.⁸

The cost of the vaccines, including administering them, runs about 38 cents per bird for Perdue Farms, according to company spokeswoman Julie DeYoung.⁹ By significantly reducing the cost of vaccination, a larger number of birds would be vaccinated, resulting in protection provided to a larger human population.

While vaccination has been on the rise over the past two years, the practice has not been widely embraced by the poultry industry, largely because of its cost and varied efficacy. Among those breeding operations that do vaccinate their birds, the number of doses given and the strains of *Salmonella* that are targeted vary widely. This can impact the vaccines' effectiveness in keeping *Salmonella* out of flocks.

Live birds are almost never tested for *Salmonella*. And because the bacteria do not make the birds sick, they show no signs of being infected.

As a result, farmers don't know whether their chicks have *Salmonella* — and, if they do, how widespread the infection is — or whether their interventions have been effective.¹⁰

New Standards for Processing Plants

On its Web site, the United States Department of Agriculture (USDA) lists the names and locations of slaughter plants where *Salmonella* has been detected in more than 10 percent of the poultry tested by the agency. Since the end of 2007, the list has included nine of Tyson Foods' 33 broiler plants and six of Pilgrim's 26 plants that were operating as of August (but no Perdue plant). Together, the country's three largest poultry producers — Tyson is No. 1, followed by Pilgrim and Perdue — account for about half of the 38 billion pounds of chicken produced in the United States each year. The Food Safety Modernization Act, signed into law in early 2011, gives inspectors from the USDA the authority to order recalls and shut down processors that repeatedly sell contaminated produce, eggs or other non-meat products. But the new law doesn't apply to USDA and the meat processors it oversees.¹¹

Despite USDA's lack of enforcement muscle, in July 2011 it tightened its performance standards for poultry slaughterhouses for the first time. Under the new standard, no more than 7.5 percent of a plant's raw chickens can test positive for *Salmonella* bacteria — down from 20 percent previously and in line with the industry's recent average.¹²

Current Vaccines on the Market

Vaccines are the most commonly administered veterinary medicines in poultry production. In fact, vaccines and vaccination have had a major impact on the development of the poultry industry, allowing economic and effective control of diseases that had previously limited its development. They are not, however, panaceas for all problems of infectious disease, but should be looked on as useful tools as part of an overall program of poultry health maintenance.¹³

Recent outbreaks have increased the use of poultry-industry *Salmonella* vaccines. Market research indicates about 60 percent of egg producers were vaccinating their flocks against *S. enteritidis* at the end of 2009, but almost 80 percent of producers were vaccinating by November 2010.¹⁴

A wide range of methods of administration of poultry vaccines is available, for use both in the hatchery and the farms.

LOCATION	INDIVIDUAL ADMINISTRATION	MASS ADMINISTRATION
Hatchery	In-ovo injection Subcutaneous injection	Coarse spray
Farm	Subcutaneous injection Intramuscular injection Wing-web puncture Feather-follicle Eye-drop Nasal drop	Drinking water Coarse spray Aerosol On-feed spray

Salmogenics[™] differs from other *Salmonella* vaccines currently on the market in the following ways:

- Some current vaccines may interfere with efficacy of other vaccines or medications administered simultaneously with and/or subsequent to vaccination.
- Salmogenics may be administered alone or with other vaccines. For chicken growers who grow 40 billion chickens per year for worldwide consumption, Salmogenics is very cost effective, reducing the cost of administration.

- Some antigens may interfere with or affect the accuracy of traditional testing or screening tools used to detect active or prior infection.
- Salmogenics does not affect the accuracy of diagnostic procedures nor reduce the effectiveness of other vaccines.
- Other vaccines are administered orally or by individual injection, requiring costly manpower to handle the birds at an additional cost of \$.38 + per bird.
- The Salmogenics vaccine can be administered with other vaccines directly in the egg before the egg is hatched without additional handling costs and without human handling stress to the live bird.

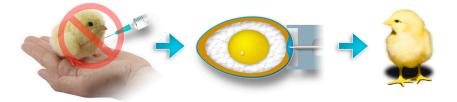
Prior vaccines generally failed to provide a *Salmonella*-containing multivalent vaccine composition which is as effective as Salmogenics in inducing an immune response to at least one intestinal pathogenic organism.

Salmogenics is the only Salmonella-fighting vaccine injected "in ovo", or "in the egg." (The vaccine is injected into the un-hatched egg, before the chick is formed.)

Advantages of "In Ovo" Vaccination

In ovo vaccination enables downstream process improvements in efficiencies such as high speed separation of chick and un-hatched eggs, rapid placement or reduced time from hatcher to farm, targeted precise therapeutic intervention and reduction of handling stress on the birds.

Hand vaccination is traumatic to young chicks. In ovo vaccination eliminates this unnecessary trauma.



"Stress (*and trauma*) in poultry could result in immune suppression, poor weight gain, high feed conversion rate and depression in egg production – in short, reduction in the general well-being as well as performance," according to a February 2013 article on www.worldpoultry.net.

Benefits of Salmogenics

Salmogenics stimulates an immune response in chickens produced from inoculated eggs to several intestinal pathogenic organisms that include various *Salmonella* strains and several wild strains of other frequent pathogenic bacteria.

The Salmogenics vaccine improves the immune system, health and welfare of the chicken, and provides a healthier source of protein for humans in a cost effective manner. The birds will be healthier and experience increased weight gain and reduced mortality, a benefit for the poultry industry and for humans. Healthier chickens mean a healthier protein source.

Management estimates that 40 billion chickens worldwide will benefit from the Salmogenics vaccine.

Indications are that Salmogenics is Effective for Eggs

On August 8, 2012, Global Green announced the Company has initiated an advanced trial for its patented, exclusively-licensed vaccine, Salmogenics. The purpose of the study is to determine how long a chicken can be protected against Salmonella after it begins laying eggs. If a layer hen is not infected with the Salmonella bacteria, then neither the egg, nor the chick, when it hatches, will have Salmonella. There is a "timelined" vaccine effect that will be logged and sequenced during the study, beginning from a newly-hatched chicken, to the 18-20 weeks before the chicken becomes a layer hen, and, after that, until the end of the hen's productive life.

Currently, Salmogenics has proven effective in helping to combat multiple strains of Salmonella in broilers, chickens produced for consumption. In the U.S. alone, The National Chicken Council reported in 2011 that 9 billion broiler chickens were produced. The Vaccine is currently in the final stage of the USDA approval process.

The most recent estimate by Global Industry Analysts predicts that the global market for eggs is estimated to reach 1,154 billion by the year 2015. Tests conducted through third parties have found that Salmogenics has been shown to significantly reduce Salmonella in the egg. Ongoing tests will be conducted to determine the efficacy of reducing Salmonella in egg-laying hens. By combining Salmogenics with the preventive measures that the USDA has mandated, management believes that Salmonella could potentially be reduced in the egg industry and that the vaccine's market potential could be expanded significantly.

On July 9, 2012, the Food and Drug Administration (FDA) announced a regulation expected to prevent approximately 79,000 cases of foodborne illness and associated deaths each year caused by consumption of eggs contaminated with the bacterium *Salmonella* enteritidis. The rule specifically addresses the presence of Salmonella in the shell of the eggs as the Salmonella bacteria can invade the egg through the shell after the egg is laid.

Facts About Salmogenics

Salmogenics[™] contains The Sotomayor Antigen and pertains to a particular patented composition of multiple germs mainly of the Genus *Salmonella* in order to control intestinal pathogenic organisms in avian species. This is a multivalent antigen designed for the purpose of inducing immunity to specific bacterial diseases and/or to enhance immunity in an infected organism.

This antigen composition stimulates an immune response in inoculated poultry to several intestinal pathogenic organism that include seven field strains of E. coli, Psedomona

aeruginosa, Aerobacter aerogenes, and four *Salmonella* strains. The antigen composition to reduce shedding of E. coli and/or *Salmonella* bacteria can be used alone or in combination with a Marek's Disease vaccine.

Currently Marek's in ovo vaccination is applied in over 90% of the USA broiler hatcheries and this practice is rapidly growing in Latin America and Europe (International Poultry Production - Volume 15, Number 8).

Salmogenics can be administered alone or with other vaccines. This makes Salmogenics cost effective for chicken growers who grow for worldwide consumption.

Prior vaccines generally failed to provide a *Salmonella*-containing multivalent antigen composition which is as effective as desired in inducing an immune response to at least one intestinal pathogenic organism such as, for example, *Salmonella* spp. which is manifested by a reduced fecal count in the inoculated poultry.

In addition, prior vaccines generally failed to provide a multivalent antigen composition which can be easily and effectively administered in a commercial farm environment at a reduced cost and fail as well to provide a multivalent antigen composition that can be utilized alone or in combination with other vaccine products as Marek's Disease without reducing the efficacy of either vaccine component and/or the ability to detect or diagnose particular diseases within inoculated birds.

Poultry Vaccine Market a Subsegment of Growing Veterinary Vaccine Market

The global market for Veterinary Vaccines is forecast to reach \$5.4 billion by the year 2015, according to Global Industry Analysts, Inc.

The veterinary vaccine market includes many segments: companion animal vaccines (canine vaccines and feline vaccines) and livestock vaccines (porcine vaccines, bovine vaccines, poultry vaccines, ovine vaccines, equine vaccines) and other animal vaccines. Livestock vaccines represent the largest product group in the veterinary vaccines market, according to Global Industry Analysts, Inc.

Key factors driving growth in this segment include the growing number of diseases in animals, increasing public awareness of the issue, and technological advancements in biotechnology research. Further, the ability of the vaccines to promote growth, develop immunity against diseases and lower the rate of mortality in the animals is driving sales of veterinary vaccines.

<u>Approval of the United States Department of Agriculture/Food Safety and Inspection</u> <u>Service</u>

The Salmogenics vaccine is in its last stages of testing and trials before the final United States Department of Agriculture/Food Safety and Inspection Service ("USDA") approval for its commercial application.

Research has focused on the development of the Salmogenics vaccine via in ovo injection delivery. At this time, the USDA has reviewed the results of the research which showed the vaccine used in the study is safe, non-toxic and causes no harm to the animal, and reduced the number of salmonella contamination as required by the USDA.

On July 30, 2011, the Company entered into a Cost and Evaluation Agreement with an unrelated independent third party in connection with the Phase 4 trials and testing required by the USDA. This Agreement will be terminated upon the final approval of the USDA.

The Phase 4 testing involves proving the following:

- The vaccine product must be safely commercially manufactured at a USDA approved vaccine manufacturer:
- That every batch of the vaccine produced during Phase 4 testing not only meets the required standards, but does so consistently;
- That the vaccine product can be safely applied commercially by the potential customers.
- That the claims made regarding the vaccine are sustainable and reproducible when applied to larger populations.

The Company's status regarding Phase 4 testing is:

- In the process of identifying and contracting an USDA approved vaccine manufacturer.
- Assure that the requirements from the vaccine manufacturer will meet the standard batch consistency as defined by the USDA.
- The Conclusion of the USDA approved large bird study to be done by AHPharma which meets the following parameters:
 - That the vaccine product can be safely and standardly commercially applied by the intended customers.
 - That the claims are sustainable and reproducible when applied to larger populations of birds.
 - To see if the vaccine can be used in other circumstances such as a combined treatment with other vaccines.
- Collect and present the date to be analyzed and results sent to the USDA for final approval.

Salmonella Challenge Study Completed

On November 28, 2011, the Salmonella challenge study, as part of the Phase 4 efficacy testing was completed. The results of the study were successful and the Salmogenics Vaccine held up to the challenge for all Salmonella strains tested. This placed the Company one step closer towards setting a model study and protocols for a successful USDA required study after the filing of our approved vaccine manufacturer.

On March 11, 2012, all the results and data have been included in a final report of the test model for Efficacy Study done with 3,306 chickens. The purpose of this Efficacy/Challenge study was to determine the effect on chickens hatched after the in ovo administration of the Salmogenics Vaccine three days before hatching.

Once USDA approval is received, Global Green, Inc. plans to manufacture, market and sell the U.S. patented, exclusively licensed vaccine known as the Salmogenics Vaccine, Salmogenics[™], to combat the Salmonella bacteria in eggs and poultry.

Salmogenics[™] was developed by Nutritional Health Institute Laboratories, LLC (a research affiliate and our majority shareholder).

<u>Trial Studies Indicate Use of Salmogenics May Improve Performance of Broilers</u> In December 2012 the Company announced that continuing internal field trial studies show that the use of Salmogenics may increase the performance of broilers, resulting in a healthier protein source and leading to increased profit for the poultry grower.

Comparing the experimental or vaccinated broilers over the controls, the studies indicated:

- Improved broiler performance included an average of a .126 pound weight gain, with each bird weighing an average of 5.73 pounds
- Feed conversion improvement of 0.039%
- Mean mortality dropped to 1.406% as compared to the 3.281%, representing a 57% improvement

The 1996 49-day trial study was conducted on 5,120 Ross chickens injected in-ovo at 17 days of embryonic stage and kept in raised wire pens of 5 x 10 feet at a 0.82 ft^2 /bird density. The studies indicate improved broiler performance compared to controls when broilers are reared in relatively clean, non-stress conditions settings of battery cages, enough to warrant further research to sustain performance claims, with a feed conversion rate of .039%. Further studies will be conducted to determine the levels of enhancement that Salmogenics could produce in injected broilers.

World Health Animal Congress

Dr. Mehran Ghazvini and Dr. Rene Reed were invited to discuss Salmogenics at the 2012 World Health Animal Congress that was held November 27 and 28. Their presentation was entitled:

Is it Possible to Reduce the Devastating Effects of Salmonella?

Salmogenics™ Vaccine: Overview and Potential

If there are any questions about Salmogenics, please contact: plagano@globalgreeninc.com

Forward-Looking Statement: This white paper may contain certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Statements on this website concerning the Company's future operating results and plans that involve risks and uncertainties are "forward-looking statements." We use words such as "expects," "anticipates," "believes," "estimates," and similar words to identify forward-looking statements. Such statements involve known and unknown risk, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to differ materially from any future results, performance or achievements expressed or implied by those projected in the forward-looking statements for any reason. More information about these factors is contained in Global Green's filings with the Securities and Exchange Commission. The Company assumes no obligation to update the forward-looking statements.

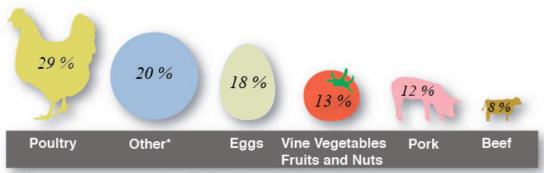


Salmonella is a microscopic, rod-shaped bacteria that can live in the intestinal tracts of birds and other animals. There are more than 2,000 strains of salmonella, some of which make animals sick and some that make people sick. Salmonella enteritidis and salmonella typhimurium account for half of all human infections.

Salmonella enteritidis

Foods Associated With Outbreaks

Nearly a third of all U.S. salmonella outbreaks between 2004 and 2008 where the source was identified were from poultry, according to the Centers for Disease Control and Prevention. Almost half of all salmonella outbreaks could not be linked to a specific food or were linked to multiple foods, according to estimates by the Emerging Pathogens Institute at the University of Florida.



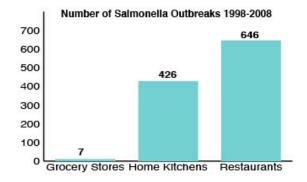
*Includes sprouts, leafy greens, root vegetables, grains and fish, oil and dairy.

Health Effects

Eating food contaminated with salmonella can lead to an infection known as salmonellosis. The danger increases for children, seniors or people with immune deficiencies. Diarrhea, fever and abdominal cramps are common symptoms that usually last four to seven days, but they can persist for weeks, requiring hospitalization. Arthritis and urination problems can last for years afterward. If salmonella enters the blood stream, it can lead to death.



Where It Strikes



Between 1998 and 2008, of salmonella outbreaks the CDC was able to trace to a source, the vast majority were linked to restaurants and home kitchens, with a small percentage tied to grocery stores.

SOURCES: Emerging Pathogens Institute, Centers for Disease Control and Prevention, U.S. Dept. of Agriculture

CREDITS: Jeffrey Benzing, Judah Ari Gross, Esther French, Robyne McCullough/News21

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