

FoodBytes

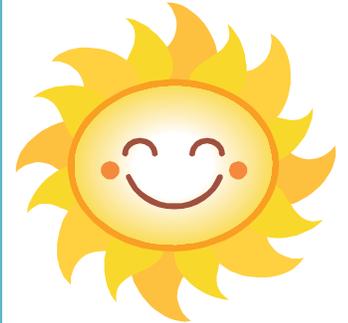
More Can be Done to Prevent Foodborne Illness

According to the Centers for Disease Control and Prevention (CDC), each year, foodborne illness, commonly known as food poisoning, affects about 48 million people in the United States. Food poisoning can happen anywhere, to anyone and from foods we might not expect. Public health surveillance, such as that conducted by the Foodborne Diseases Active Surveillance Network (FoodNet), provides needed data for tracking trends (1).

and non-O157, *Shigella*, *Vibrio* and *Yersinia*, and the parasites *Cryptosporidium* and *Cyclospora*. The data collected by FoodNet also lets CDC, its partners and policy makers know how much progress has been made in reaching national goals for reducing foodborne illness (1).

Since all the faces on the progress report are not smiling, we can assume that more can be done to prevent foodborne illness. CDC has documented that from 2009-2010,

Happy Summer



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Food Net reports on yearly changes in the number of people who become ill as a result of a confirmed foodborne illness.

Foodborne diseases monitored through FoodNet include infections caused by the bacteria *Campylobacter*, *Listeria*, *Salmonella*, Shiga toxin-producing *E. coli* (STEC) O157

among the outbreaks with a known single setting where food was consumed, 48 percent were caused by food consumed in a restaurant or deli and 21 percent by food consumed in a private home (2).

(continued on page 4)

Allergen Vs Allergy

As we leave the sneezes and coughs of spring behind, it is good to understand the difference between allergies and allergens. An allergen is defined as a type of antigen that produces a strong immune response in which the immune system wards off a perceived threat that appears harmful to the body. Allergies are the result of the allergens. In the food realm, various allergens exist that can cause great harm to individuals. Most have heard about “Gluten Free” products because of the growing number in the population that cannot digest a gluten product without negative repercussions. Gluten intolerance symptoms may include: bloating, abdominal pain, diarrhea, muscular disturbances and even bone and joint pain. Gluten helps dough rise and keep its shape. Gluten is found in wheat and is a complex protein also found in barley and rye. In addition, people have also gone as far as to exclude oats from the diet, because of the possible cross contamination in the milling processes at some facilities.

The disease associated with gluten allergy is known as Celiac disease. This disease results in the weakening of the small intestine’s lining and ultimately prevents the absorption of some nutrients. There is no known



cure for the disease, therefore, diet is the only weapon. A strict gluten free diet can help to rebuild the damaged intestine.

Many allergens exist but two widely known allergens are milk and peanut. Lactose intolerance is often confused with a milk allergy. Lactose intolerance is a non-allergic food sensitivity where a person does not produce the lactase enzyme which aids in breaking down of the lactose found in milk from an ani-

mal. Some individuals with a milk allergy can be affected by any or all of the proteins in milk. Different animal milks can offer different species of protein. That is why a person who cannot drink cow’s milk can drink sheep or goat’s milk. Again, avoidance is the only real help for individuals that suffer from milk allergies.

Another common allergen is of peanuts. This is probably the widest known food allergen but it is estimated to only affect roughly 0.5 percent of the population. Stories have been told of extreme sensitivity to peanut protein; someone who had eaten a peanut butter and jelly sandwich earlier in the day kissed an individual resulting in the individual entering into anaphylactic shock. Although this extreme form is rare, it can occur.

A peanut is a legume and should not be confused with tree nuts which are considered a hard-shelled fruit.

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Indiana Hosts Shellfish Meeting

The Indiana State Department of Health (ISDH) hosted the 2013 Central Region State Shellfish Cooperative Program Meeting at the Indiana Government Center on June 25 and 26.



Representatives from the FDA and states including Indiana, Kentucky, Ohio, North

Dakota, Wisconsin, Pennsylvania, Delaware, Virginia, Maryland, New Jersey and also the District of Columbia discussed a variety of molluscan shellfish topics, updates and Interstate Shellfish Sanitation Conference (ISSC) proposals. The ISSC is the mechanism by which the National Shellfish Sanitation Program (NSSP) Model Ordinance is changed (similarly to how the Conference for Food

Protection drives the evolution of the FDA Model Food Code). Indiana and its Midwestern neighbors are classified as “inland states” due to the absence of shellfish harvesting waters, but must equally implement the NSSP requirements for interstate distribution of raw fresh or fresh frozen oysters, clams, mussels and roe-on scallops.

by Mark Mattox, ISDH

Foodborne Disease Spotlight: Listeriosis

Listeriosis is a serious infection usually caused by eating food contaminated with the bacterium *Listeria monocytogenes* (LM). The disease primarily affects older adults, pregnant women, newborns and adults with weakened immune systems. However, rarely, persons without these risk factors can also be affected. A person with listeriosis usually has fever and muscle aches, sometimes preceded by diarrhea or other gastrointestinal symptoms. Almost everyone who is diagnosed with listeriosis has "invasive" infection, in which the bacteria spread beyond the gastrointestinal tract. The symptoms vary with the infected person:

- Pregnant women: Pregnant women typically experience fever and other non-specific symptoms, such as fatigue and aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery or life-threatening infection of the newborn.
- Persons other than pregnant women: Symptoms, in addition to fever and muscle aches, can include headache, stiff neck, confusion, loss of balance and convulsions.

Listeriosis can be present in different ways depending on the type of infection. In older adults and persons with immunocompromising conditions, septicemia and meningitis are the most common clinical presentations. Pregnant women may experience a fever and other non-specific symptoms, such as fatigue and aches, followed by fetal loss or bacteremia and meningitis in their newborns. Immunocompe-

tent persons may experience acute febrile gastroenteritis or no symptoms.

The general guidelines recommended for the prevention of listeriosis are similar to those used to help prevent other foodborne illnesses. In addition, there are specific additional recommendations for persons at higher risk, such as pregnant women, persons with weakened immune systems and older adults including:

Meats

- Do not eat hot dogs, luncheon meats, cold cuts, other deli meats (e.g., bologna), or fermented or dry sausages unless they are heated to an internal temperature of 165°F or until steaming hot just before serving.
- Avoid getting fluid from hot dog and lunch meat packages on other foods, utensils, and food preparation surfaces, and wash hands after handling hot dogs, luncheon meats and deli meats.
- Pay attention to labels. Do not eat refrigerated pâté or meat spreads from a deli or meat counter or from the refrigerated section of a store. Foods that do not need refrigeration, like canned or shelf-stable pâté and meat spreads, are safe to eat. Refrigerate after opening.

Cheeses

- Do not eat soft cheese, such as feta, queso blanco, queso fresco, brie, Camembert, blue-veined or panela (queso panela) unless it is labeled as made with pasteurized milk. Make sure the label says, "Made with pasteurized milk."

Seafood

- Do not eat refrigerated smoked seafood, unless it is

contained in a cooked dish, such as a casserole, or unless it is a canned or shelf-stable product.

- Refrigerated smoked seafood, such as salmon, trout, whitefish, cod, tuna and mackerel, is most often labeled as "nova-style," "lox," "kippered," "smoked" or "jerky." These fish are typically found in the refrigerator section or sold at seafood and deli counters of grocery stores and delicatessens.
- Canned and shelf stable tuna, salmon, and other fish products are safe to eat.

Listeria is found in the environment and all people are exposed to it regularly. Therefore, there is no clinical value in performing laboratory testing on asymptomatic patients, even if high risk. For symptomatic patients, diagnosis is confirmed only after isolation of *Listeria monocytogenes* from a normally sterile site, such as blood, CSF (in the setting of nervous system involvement), or amniotic fluid/placenta (in the setting of pregnancy). Stool samples are of limited use and are not recommended. Cultures are expected to take one to two days for growth; however, a negative culture does not rule out infection in the presence of strong clinical suspicion. Serological tests are unreliable, and not recommended at the present time. Listeria Educational Resources:

<http://www.cdc.gov/listeria/resources/index.html>.

**by Sarah Slette, Enteric Epidemiologist*

David McSwane Receives Prestigious Award

David McSwane, HSD, received the Indiana State Health Commissioner Award during a retirement reception hosted by the Richard M. Fairbanks School of Public Health, IUPUI, on June 26th. Scott Gilliam presented the award to Dr. McSwane on behalf of Dr. William VanNess, Indiana State Health Commissioner.

Dr. McSwane, a Wabash College undergraduate, contributed over 42 years of service to the benefit of public and environmental health with his roots beginning at the Monroe County Health Department. He later decided to pursue further education and completed his masters degree and doctorate with Indiana University.

Dr. McSwane retired as a full professor, but was very active in



Scott Gilliam, ISDH Food Program Director and David McSwane, HSD

many different professional, community and industry organi-

zations and was known as an international subject matter expert in the field of food safety. "He has been a friend to public health and to state and local health departments by always being available for advice on knotty issues," said Scott Gilliam, Director, Food Protection Program. Dr. McSwane is a past president of the Indiana Environmental Health Association and a recipient of the Tim Sullivan Memorial Award winner for food safety. He will continue to be active in retirement as the Executive Director of the Conference for Food Protection and other assorted projects and activities. We all wish Dr. McSwane the best in his future endeavors and offer him our gratitude for his many years of service.

More Can be Done to Prevent Foodborne Illness

(continued from page 1)

The majority of state and local health department Food Safety Inspection Officers (FSIO) inspect retail food establishments, so they are on the front line for the prevention of foodborne illness in the restaurant. This can be accomplished if the FSIO conducts a risk based inspection focusing on the five risk factors associated with foodborne illness prevention and should include:

- Demonstration of Knowledge
- Implementation of Employee Health Policies
- Hands as a Vehicle of Contamination
- Time/Temperature Relationships
- Consumer Advisory

FSIO can collect routine samples of foods that are Recommendations for the FSIO's include the following: general outreach to restaurants, grocery stores and schools. Routinely after inspections, hand out educational materials, particularly if you have noticed a trend with certain violation citations. One suggestion is to create a website for establishments to visit with important food safety resources.

As a FSIO, you also have contact with consumers who frequent your establishments. When consumers come into your office, always have educational handouts available. You also may have access to the local schools, senior centers or even community health fairs for special projects about handwashing or preparing safe food. Involve

your town mayors and councils in a food safety event including advertising in the community newspapers and local radio stations.

There are many ideas that you can use to promote food safety in your communities and food establishments. All it takes is a little time and a little imagination.

Sources:

1. <http://www.cdc.gov/features/dsfoodnet2012/>
2. <http://www.cdc.gov/Features/dsFoodborneOutbreaks/>

by Lisa Harrison, ISDH

Allergen Vs Allergy

(continued from page 2)

Tree nuts include other nuts, such as almonds, Brazil nuts, cashews, hazelnuts, macadamia nuts, pecans, pine nuts, pistachios and walnuts. Again, there is no known cure for the allergy and a strict avoidance of peanut or tree nut products serves as the only barrier.

Many foods promote a reaction to affected individuals such as fruit, garlic, meat, shellfish, soy and eggs. Allergens can occur on a molecular level such as sulfite sensitivity as well.

Allergy symptoms depend on the allergy and they may affect sinuses, airways, digestive system and even skin. Food allergies may exist in a mild form of tingling of the mouth or an extreme form of anaphylactic shock after ingesting the allergen. There are many types of allergic reactions from insect stings to hay fever. We cannot

isolate all allergens, but we can alert people to the potential threats that may exist in foods by properly labeling the product with a simple statement of inclusion. A statement on the label such as, “*Contains Wheat, Milk, Egg and Soy*” immediately after or adjacent to the list of ingredients alerts the consumer that there are possible allergens in the product. If you know you are affected by an allergy, make sure to look for these alerts on the products you purchase. However, if you are unsure whether or not you have a food allergy, pay attention to your symptoms and the foods you ingest. Food allergen sensitivity usually occurs within a short period after ingesting the food so the home diagnosis is quite possible, but is not advised if extreme conditions occur. There is no standard for testing for a food allergen. A skin

test may occur if you visit with a doctor and discuss symptoms. In a skin test, a small amount of the suspected food is put on the skin and then a skin prick pierces the food beneath your skin. A positive for this test will result in a raised bump or reaction. Another test involves eliminating a particular food from your diet for several weeks and then reintroducing that food later to see if symptoms develop. A blood test may also be implemented. This method measures your immune response to particular foods by monitoring the amount of antibodies in the bloodstream. No one test is better than the next as allergens can be difficult to isolate. A thorough diagnosis should utilize several different tests.

by David Schmidt, ISDH

Global Handwashing Day 2013

Handwashing with soap is the “vaccine that prevents infection, according to the Global Public-Private Partnership for Handwashing (PPPHW). Every year on Oct. 15, Global Handwashing Day is celebrated by approximately 200 million people in 100 countries promoting not only getting your hands wet, but using soap to really get your hands clean.

Starting as a children’s program in schools, this plan has ballooned to a worldwide campaign to educate people on the importance of handwashing with soap to reduce infections caused by diarrheal pathogens.

The PPPHW says studies



have shown that worldwide, people will rinse their hands, but seldom use soap even though it is available to them. It’s instead used for bathing and laundry, not for proper handwashing. Rinsing your hands does remove the visible dirt, but only soap can remove the pathogens that

can’t be seen. Public health officials has the challenge to make handwashing a “worldwide habit and social norm”.

You can support this wonderful campaign (to promote washing your hands with soap) by celebrating Global Handwashing Day 2013 on Oct. 15. If you would like more information on host-

ing an event in your county or place of work, visit PPPHW’s site at:

<http://globalhandwashing.org/ghw-day>

by Lisa Harrison, ISDH

AFDO Conference-Integrating the Food Safety System

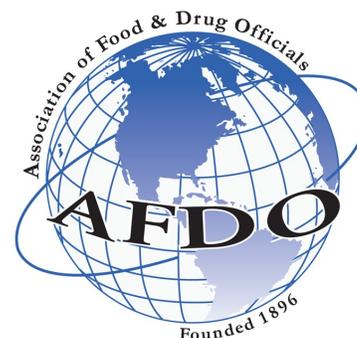
Krista Click and Scott Gilliam attended the 2013 Annual Educational Conference for the Association of Food and Drug Officials (AFDO) held in Louisville, KY on June 8th to 12th. The focus of the conference was “Implementing the Integrated Food, Drug and Medical Device Safety System.” Different agencies, and even persons within an agency, must work together to include all of the pieces, such as surveillance, inspection and enforcement, into one whole functioning body. Throughout the farm to fork system, agencies must overcome their turf and trust issues and work toward the common goal of protecting public health.

A workshop held prior to the conference included time spent understanding, using and critiquing the Integrated Food Safety System (IFSS) toolkit developed by the International Food Protection Training Institute (IFPTI), FDA, AFDO and New York State Agriculture and Markets. The toolkit should be available later this summer and can be used in working groups to understand how each person from different agencies or positions can coordinate work. The workshop included representa-

tives from state health and agriculture agencies, FDA, the Canadian Food Inspection Agency (CFIA) and industry. “It was a great experience working with a variety of stakeholders and forging new relationships as part of the workshop,” Gilliam said.

Many interesting and informative speakers were heard at the conference. IFPTI fellows presented on their research projects, such as inspector awareness of reduced oxygen packaging (ROP) requirements, the debate over whether the areca nut is a food or drug and issues concerning imported foods. The IFPTI Fellowship program is a great way of developing strong leaders amongst our profession and ISDH encourages state and local food safety inspection officers to consider applying for acceptance into the next cohort of fellows.

The role of tattoo ink in recent outbreaks and the factors contributing to contamination were presented. Infections are found especially in black and gray tattoos since water is used to dilute the ink to produce different shades. No tattoo inks are FDA approved color additives; the FDA has traditionally not exercised its authority over tat-



too inks or pigments. Food supply transportation, new tools for food defense and risk mitigation and foodborne illnesses were also discussed.

The FDA Food Safety Modernization Act (FSMA) was underlying the work in this conference. FDA is encouraging public comment on proposed rules. There may be delays in rule implementation so that the rules are meaningful. You may review the open and closed dockets at:

<http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm261689.htm>

You may view this year's AFDO conference and workshop presentations at:

<http://www.afdo.org/presentations/2013>

by Krista Click, ISDH

POPCORN, 2013 Indiana State Fair

Does the smell of popcorn start you craving a white, fluffy and often times buttery snack? Well, look no further than the



2013 Indiana State Fair where popcorn will reign supreme as the snack of choice.

It is the Year of Popcorn at the fairgrounds and they are popping corn like crazy for the huge crowds expected to visit. They are even revealing the World's Largest Popcorn Ball on Aug. 3rd consisting of a 5,200 pound popped sphere of the fluffy stuff.

The Indiana State Fair runs Aug. 2-18 with not only pop-

corn, but also the fun food, games and rides that brings in the visitors. According to the state fair website, there is “Fun at Every Turn!”

Visit the Indiana State Fair website for more information at: www.in.gov/statefair/fair/index.html

Tracking of Complaints, Recalls & Samples

The ISDH Food Protection Program (FPP) has begun tracking the number of complaints, recalls and samples received each day through the use of the new CodePal data management system.

The graph below provides information to assist with investigation of possible foodborne illness trends.

Each complaint that comes into our office is put into CodePal and sent to the appropriate staff member for immediate investigation and then added to our data. We take the compiled data and look for increased activity, which in turn, could lead

us to an early detection of a foodborne illness outbreak.

Most recalls are generated from other states. If recalled products are distributed in Indiana or the neighboring states, it could impact our consumers. Local health departments and other specific groups are alerted when a recall has been issued so that recall effectiveness checks can be performed when necessary.

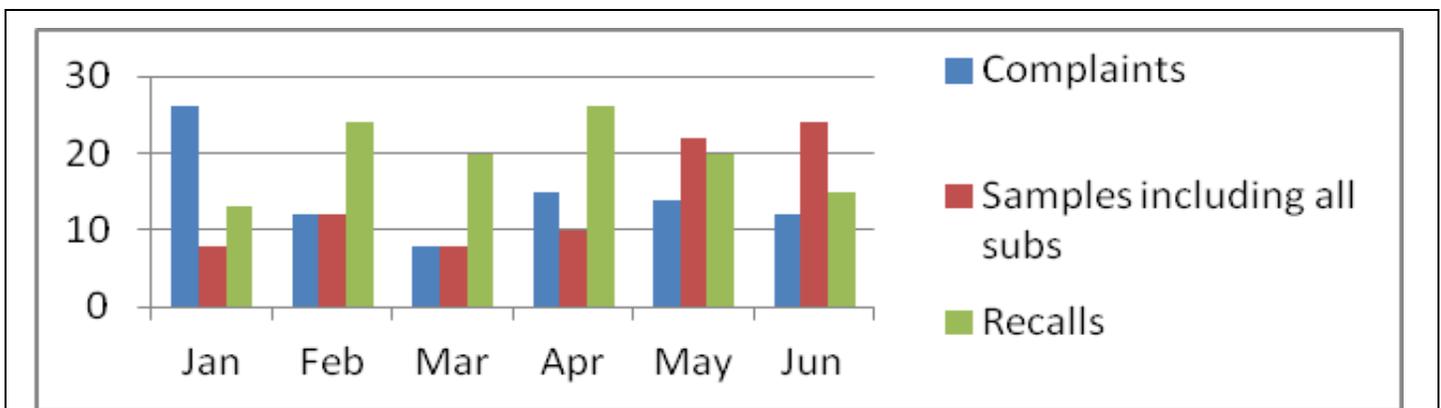
Sampling is another component of our tracking program. Samples from consumers are sent to the lab for analysis to determine via CodePal, the presence of foodborne pathogens

and/or environmental contamination. By tracking these samples, we are able to quickly analyze the data and detect possible foodborne outbreaks.

The ISDH FPP has also been collecting surveillance samples of fresh produce in an effort to prevent contaminated foods from reaching consumers.

First quarter tracking numbers are a total of 46 complaints, 28 sub samples and 57 recalls.

by Dan Gala, ISDH



CodePal Beginning to be Used Throughout the State

CodePal, the computerized inspection program, used by state FSIO in the field is now being used by other counties and universities throughout the state.

Introduced in 2011, CodePal offers users the ability to enter inspection data into a central database. When the system is fully implemented all counties, universities and state FSIO's enrolled with CodePal will have access to these composite records. This inspection reporting pro-

gram helps to meet requirements for the FDA Voluntary Retail and Wholesale Standards.

Currently, there are 35 users including:

- State FSIO field and office staff
 - Daviess County
 - Ball Sate University
 - Indiana University
 - Delaware County
 - Purdue University
- 2013 brings 7 more counties including:
- Jefferson County (installed)

- Orange County (installed)
- Harrison County (pending)
- Ripley County (pending)
- Steuben County (pending)
- Spencer County (pending)
- Pulaski County (pending)

To add your county to the list for CodePal installations or to ask questions, contact your state field representative for more information or call the ISDH central office at 317-234-8569.

Improving Food Safety on the Farm

During the last week of June, Scott Gilliam, Director, and Jenny Parker, Food Safety Farm Consultant South, spent the week visiting cantaloupe farms and learning about their efforts for improving food safety to prevent another outbreak like last year. Purdue University Extension and Food Science held three half day workshops at three different farms covering packing shed food safety. Dr. Haley Oliver and Dr. Amanda Deering, Food Science and Scott Monroe, Extension Specialist, planned and hosted the workshops with Gilliam providing a short overview of the planned ISDH monitoring activities. The focus of the workshops were to help farmers prepare for potential FDA cantaloupe farm audits occurring in 2013. The FDA cantaloupe assignment is being done in an effort to understand the extent of the problem as it relates to *Listeria Monocytogenes* in the packing shed environment. This pathogen was the culprit in the 2011 Jensen Farms outbreak in Colorado. The workshop provided an overview of *Listeria Monocytogenes* and ways it can be controlled including the needed improvements in equipment design, control of standing water and cleaning. A demonstration of the use

of Adenosine Tri-Phosphate (ATP) pens was done as a way of helping them set maximum limits of organic matter residual on food contact services. Further explanations were provided on the use of follow-up environmental swab testing to confirm elimination of pathogenic bacteria. The ISDH will also be using ATP pens as part of their efforts in ensuring the food contact sur-



faces are being properly cleaned. "We have a long way to go for these farms to achieve modern day food safety standards, but several of the leading cantaloupe farms are taking the initiative and setting the example for the rest of the industry in the state, said Gilliam." We are hopeful these efforts will prevent another outbreak occurrence and keep our citizens enjoying cantaloupe consumption without becoming ill. Gilliam and Parker visited several other farms providing

consultation and guidance on making improvements during the same week. "In the end, it was a learning experience for all of us and one that should result in additional protection for the public health, said Gilliam." The ISDH is doing extensive produce sampling this year to check for pathogens and we encourage locals to do some as well at farmers markets. We strongly recommend that the locals enforce our position that produce sold at retail is from a regulated source only. We will assimilate the data and consider what direction we will be moving toward in 2014. We will most likely establish a sampling initiative that would enlist the cooperation of the local health departments around the state. An announcement will be made and further information provided in the coming months. However, the local health department is always encouraged to collect food samples as a matter of routine whenever the need arises. Please feel free to contact your area field representative or our Food Safety Farm Consultants for assistance. For contact information please visit our website at: <http://www.state.in.us/isdh/20640.htm>

H.E.N.S.S.

Retail Food Sanitation Requirements Title 410 IAC 7-24 Sections 120-127 deal with infection control in a retail food establishment. Establishments must show that they have a sufficient employee illness policy (verbal or written) to establish a protocol for excluding and/or restricting sick employees.

In an effort to prevent transmission of foodborne pathogens through ill employees, the policy must include the most common symptoms associated with sick employees including: diarrhea, vomiting, fever, jaundice, fever with a sore throat and lesions containing pus. The policy also must include the "Big 5" patho-

gens which can be remembered by the following acronym H.E.N.S.S.:

- H * Hepatitis A Virus
- E * E.Coli Shigatoxin
- N * Norovirus
- S * Salmonella
- S * Shigella



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Indiana State Department of Health

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or postal address on this page.

Did You Know?

Oh, POPCORN...you are so yummy! How many of you can't resist the smell of popcorn when you sit down to watch a movie at the theatre or how about the person who decides to pop a bag of microwave popcorn in the office giving you instant cravings for the fluffy, buttery white goodness...ok, I better stop thinking about it or I will have to stop writing this article and give in to my crave.

Well most American's agree with you and I, popcorn is awesome! Did you know:

- ◆ Americans consume 15 billion quarts of popped corn annually which is 49 quarts, per man, woman and child
- ◆ Approximately 70 percent is eaten at home and 30 percent outside the home

- ◆ Indiana is the second largest producer of popcorn in the nation
- ◆ The peak season for popcorn is the fall
- ◆ In the early 1980's, microwave popcorn was introduced and today more than 80 percent of households own microwaves
- ◆ Popcorn has no artificial additives or preservatives and is sugar-free
- ◆ The oldest ears of popcorn ever found were discovered in the Bat Cave of west central New Mexico in 1948 and 1950. The oldest Bat Cave ears are about 4,000 years old.
- ◆ 1 ounce of un-popped popcorn equals 1 quart of popped corn

So if you would like to see where I got all these fun popcorn facts, go to the following website for more information:

<http://www.popcorn.org>

