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POINTS OF INTEREST

- Greener Organics can separate packaged food waste into organics and inorganics.
- A machine (the "Tiger") can handle up to 25 tons of material per hour.
- The company then offers the recycled waste as fuel, fertilizer, and pet food additives.

Putting food waste to use

One billion tons of the food produced each year is wasted, just gone, says Brett Dean, President of Greener Organics. He told a recent gathering of the IEHA Food Protection Committee that his company specializes in converting wasted food to other useful products like fuel, animal feed, or fertilizer. His company can accept food in packages, where other companies can't. The "organics" are extracted, then a process of composting and anaerobic digestion follows to reduce the materials to useful products.

Brett says the half million dollar machine was imported from Italy. The

process includes "pulling, tearing, and shredding" to separate materials. The large machine uses an auger to push product through it, and an agitator to spin the materials forcing separation. Gravity helps too, he added. The machine called the "Tiger" can handle up to 25 tons of materials per hour, but Brett said it doesn't handle glass well.

"It pulverizes it fine, turning it into sand," he said, "but the material was so fine that large quantities of glass clogged the machine and caused one of the motors to burn out."

He said a glass crusher is now used and glass pieces are separated prior to feeding into the machine.

Brett added that the 33,000 sq. ft. facility in Coldwater, Michigan, is secure, and they serve customers in several states. He said there is nearly a 98% success rate in separating organic and inorganic components.



Greener Organics can accept packaged food waste and convert to usable materials like fuel or animal feed additives.

What you should know about...

CBD OIL

Cannabidiol oil (CBD) is spreading as the latest hot health product, seemingly available nearly everywhere. It's even being sold added to food, and that may be a problem.

While legal to sell in Indiana, adding CBD oil to any food would be considered an "additive" by FDA and need to meet that criteria, and that has yet to happen.

A statement from FDA Commissioner Scott

Gottlieb, MD said that public hearings were held giving stakeholders a chance to weigh in. Commissioner Gottlieb says there are still questions about safety of CBD oil and any effects from long

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You're eating plastic, and you don't know it

A new study has revealed that people are eating plastic every day. Not chunks, but what scientists call microplastics - bits of plastic that are everywhere.

A study in *Environmental Science and Technology* says humans might be consuming up to, and over, 50,000 microplastic particles yearly. If you add to that the plastic particles that might be inhaled, the number grows to over 74,000. A microplastic particle is defined as a piece smaller than five millimeters and can only be seen with a microscope. Besides what may be in food, researchers looked for micro-

plastic particles in drinking water and air. Scientists found that if a person drinks the recommended amount of water daily, he or she might also be taking in up to 4,000 tiny bits of plastic.

IS IT TOXIC TO PEOPLE?

Does plastic humans consume affect the body? Enter the bloodstream? Or might the microplastics pass through harmlessly? The answer is no one knows but other recent studies indi-

cate that the cumulative effect in eating plastic might be toxic, and different types of plastics will have differing toxic properties. Plastics can absorb chemicals such as lead from the environment, while other plastics are made with toxic chemicals like chlorine. Can this affect the

immune system?

It's not known.

But a simple step people might take is to drink water from reusable containers, not from plastic water bottles.



Backyard flocks pose increased risk: CDC

The CDC is investigating Salmonella cases in 41 states, and at last report, upwards of 279 total cases from several Salmonella serotypes all connected to poultry. The sources are not from commercial producers but from backyard flocks and multiple hatcheries that supply the chicks.

"Salmonella spread is likely caused by handlers not washing hands."

CDC says contact with chicks and ducklings are the likely source with people reporting using several sources including agricultural stores, websites, and hatcheries.

The CDC says the spread is likely caused by people handling the poultry, then failing to wash hands properly with soap and warm water.

Children can be especially vulnerable and their handwashing should be supervised.

More advice: Don't let chickens inside the house, wear separate shoes while taking care of poultry and leave them outside, and don't kiss or snuggle with poultry!

Finally, CDC advises that birds can carry Salmonella but look perfectly healthy.

What you should know about... (continued)

(Continued from page 1)

term exposure. FDA says it has already warned several companies marketing CBD products for making "egregious and unfounded" claims about products. If a therapeutic benefit is claimed, it must be FDA approved, says the agency. If no

such claim is made, then the safety of CBD oil just as an additive is a concern.

If CBD products are approved, they have to meet the requirements of the US Food Drug and Cosmetic Act, and the Food Safety Modernization Act. It may come down to how the products are marketed, the intended

uses, and interpretation of the rules as to whether CBD oil products comply.

In the meantime, the ISDH Food Protection Program is not able to offer guidance to local health departments until clarification from higher government agencies is provided.

Destroy pathogens by flipping a switch?

Researchers at the University of Maryland (UMD) believe there is an answer to destroying pathogens on difficult-to-clean surfaces of fresh produce. They utilize the fourth state of matter - plasma. One knows the better known states - gas, liquid, and solid, but plasma might be the most abundant, says Professor Gottlieb Oehrlein, professor at UMD's Materials Science and Engineering department, according to *Food Safety News*.

Plasma is an electrified gas and the most energetic and reactive state of matter, he says.

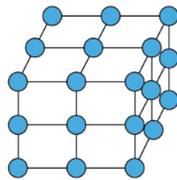
"Electrical energy can produce plasma in the air and it can have

a strong impact on pathogens etching part of their outer membranes and changing them biochemically," he says.

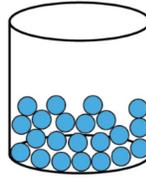
The cold plasma bombards the surface of produce and can change the functional and structural integrity of that surface essentially destroying it.

This process has sparked interest with food safety professionals because the sterilization pro-

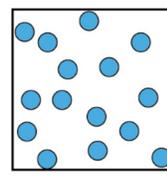
cess works without heat, thereby preserving food quality, researchers believe. Fresh produce has been a leading cause of foodborne illness outbreaks and it's known that the recommended washing techniques are not fully effective in removing pathogens, especially if the washing water is contaminated, thereby spreading pathogens. Adding chlorine to wash water is risky.



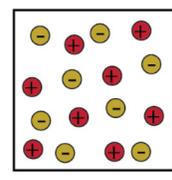
Solid



Liquid



Gas



Plasma

Can a 3D printer be used to make food utensils?

3D printing is starting to become commonplace, and more affordable. Could this have any benefit to the foodservice community?

Pinshape Blog, an online community for 3D printing enthusiasts, says there are concerns.

"Some plastics are not suitable for food contact while others might not take heat."

Even the smoothest looking prints have cracks and spaces to allow food to collect and therefore make cleaning and sanitizing difficult. That is, it might not be considered "food grade." It might be possible to create a single use utensil that would be OK.

Pinshape Blog says that according to a study by the Illinois Institute of Technology and the National Institute of Applied Sciences in Lyon, France, printers using ABS and PLA plastic likely

leave behind ultra-fine particles (UFP) on printed surfaces. These UFPs are fine enough to be inhaled and can cause adverse health effects.

Another concern is that ABS plastics is not suitable for food contact as toxic chemicals could leach out.

Natural PLA, however, is made from corn and should be safe unless additives, like for color, have been added.

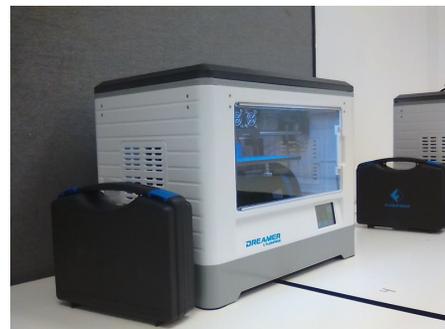
And, 3D printed plastics are not dishwasher safe - the necessary heat can and will warp the gadget that was printed. PLA plastic will definitely not take the heat.

Finally, *Pinshape Blog* cautions that some of the 3D printer brass nozzles can contain lead that could lead to known health issues. No tests have confirmed

how much lead might be transferred during the printing.

Could this be done safely? Perhaps. Use a food-safe hot end/extruder, like stainless steel.

Don't use a high temp dish machine. Chemical sanitizing may be OK, but test the material in the chemical sanitizer to see if it damages the material. Limit the time food is in contact with the printed utensil. And choose the printing material wisely. PLA might not be good for a coffee cup because it could melt from the heat.





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FOOD PROTECTION COMMITTEE

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IEHA MISSION:

To promote, preserve and protect environmental public health in the State of Indiana, and to encourage a spirit of cooperation among all environmental health stakeholders while serving its members in the regulatory, industry and academic communities.

The **Food Protection Committee (FPC)** is one of four standing subcommittees of the **Indiana Environmental Health Association, Inc.** The committee meets approximately four times per year with dates and locations chosen by the members. Its focus is to discuss food safety related issues of interest to its members. While all IEHA members and guests may attend meetings, only voting members, as specified in the IEHA Constitution and Bylaws, may vote. Meeting information is disseminated by email. To be added to the email list, contact one of the co-chairs, or your IEHA chapter representative.

FPC Co-chairs: Lisa Chandler, Sarah Dallas

FPC Newsletter Editor: Ed Norris

Tidbits and morsels

Can what you eat affect climate change? Researchers say yes, if you eat a lot of meat. Studies outlined by the World Resources Institute say that consuming animal-based foods is more resource intensive than eating plant foods. And beef is a big culprit. Cows require 20 times more land and give off 20 times more greenhouse gas emissions per edible protein than plant-based foods. Chicken and pork are only slightly better, according to the study. One doesn't have to give up meat, researchers say, but just cut back on weekly consumption.



Americans eat a lot of rotisserie chicken from local supermarkets. A lot meaning 625,000,000 yearly. That's 1.7 million per day!



Food52 reports that according to Google searches, the most popular ice cream flavor in the United States is Cookies and Cream! Fourteen of the 50 states agree, making it the winner. Indiana's most popular flavor, says Google, is Peppermint, a distinction shared with Iowa, Nebraska, and North Carolina.



Did you know that there are some non-food uses for some ordinary foods? As recently reported in the *New York Times*, these common foods can be used effectively on these common problems.

- Cooking oil is good for cleaning paintbrushes and silencing squeaky hinges.
- Mayonnaise can be used to remove sticker residue.
- You might polish brass and

copper with catsup.

- A cola beverage can unplug a clogged drain, clean a toilet, and remove a grease stain in clothing.
- Rubbing a piece of walnut hides scratches on hardwood.
- Onion or garlic odor on hands? Rub hands with a lot of salt, then rinse in cold water.



Remember the next Food Protection Committee meeting will be Thursday, August 22 at 10:00 AM.

