

SUSTAINABLE

LEADERS

IW

ACTION

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INSPIRE

DEMONSTRATE

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EDUCATE

2 ACTION OF THE MONTH: DECEMBER

Being heat-wise

3 BICYCLE INFRASTRUCTURE

Rethinking our urban planning

6 RECYCLING CRISIS

How the rise in a product is leading to the demise of an environment

8 GREENER HOLIDAYS

Ideas of how to be sustainable during the holidays



9 THE LIFE AND DEATH OF AN EGG LAYING HEN

The detailed truth of the mistreatment of chickens and personal story

15 VEGETARIAN RESTAURANTS

Check out local businesses and save the environment while you're at it

RECIPE OF THE MONTH

13 STUFFED YAMS

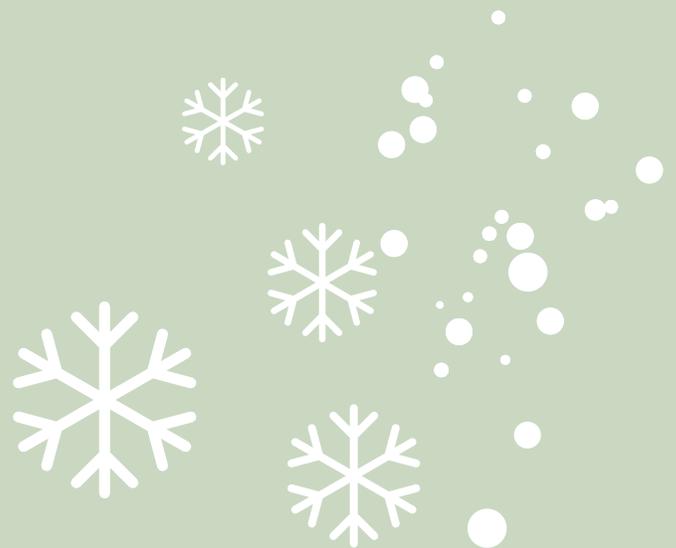
ACTION OF THE MONTH

Be heat wise

By Abigail Strofer

December's Action of the Month is Be Heat Wise! Winter is approaching fast, and as your heater is working overtime, it is easy for energy to be wasted. However, there are many quick and simple ways to conserve both energy and money, while keeping your house warm.

20% of a home's energy can be lost through the windows! You can avoid this by using window coverings such as drapes or curtains to improve insulation. The best energy efficient drapes or curtains are mid to heavyweight drapes with good lining, as well as honeycomb, woven, or roman shades. For the best results, make sure that drapes and curtains are completely covering the window, hanging close to the window pane, and falling all the way to the window sill or floor. Blinds are not as effective as curtains or drapes, however, as they are more suited to warmer climates. Additionally, keep your windows uncovered during the day so as to let sunshine in, but once the sun goes down, cover them to trap the heat in.



In order to make sure that heat is circulating around the whole house, check to make sure that nothing is blocking heating vents, registers, and radiators and move furniture away. You can also use ceiling fans set to rotate clockwise and at the lowest speed in order to push warm air that collected towards the ceiling back down to the ground. Make sure to turn off the fans when a room is unoccupied.

You can also avoid heating unused rooms by closing doors and blocking off vents when not in use, but be sure to never close off more than 25% of vents at any time. Chimneys are also a big source of heat loss in homes, so close the flue when not in use. Another simple way to insulate your home is to add rugs or carpet to cold, exposed floors. One last quick and easy tip is if you have a programmable thermostat, which allows you to preset temperatures for specific times of the day, you can set it on the low end during the night and when out of the house and higher when home during the day.

Keeping your home warm during the winter should not be costly and wasteful. Hopefully, with these simple tips, you can make the necessary adjustments so that you can keep your house nice and warm, all while conserving energy. It's a win-win!

BICYCLE INFRASTRUCTURE

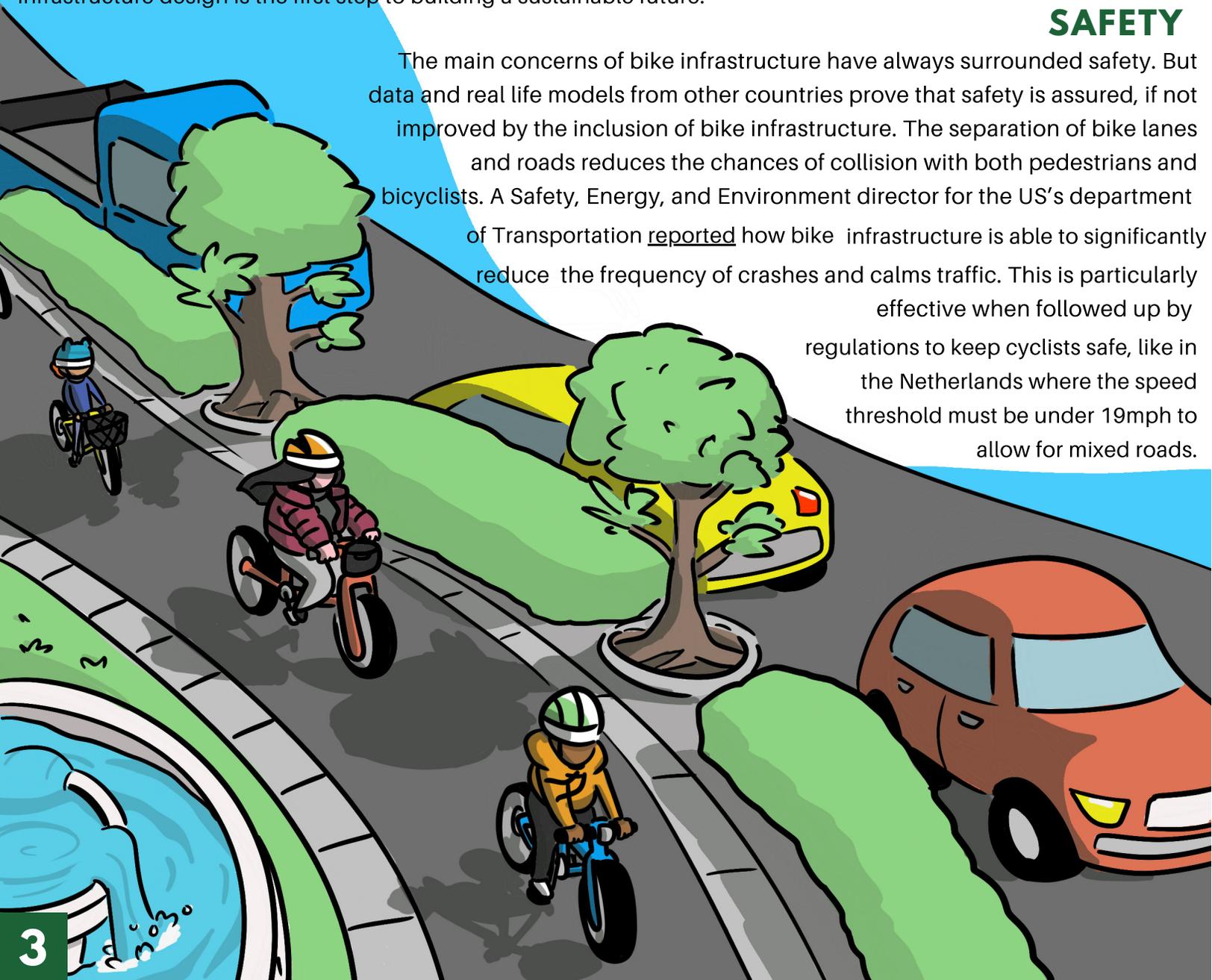
WRITTEN BY SARAH KHAN, ARTWORK BY KYLE SUEN

Each year, the average passenger vehicle releases about 4.6 metric tons of carbon dioxide annually, making it the biggest contributor to global warming in the US (about 28% of total greenhouse gas emissions). But each year, another child learns how to use one of the most effective weapons against global warming -- a bike! If biking were more accessible than roads and highways, then greenhouse gas production per capita would significantly drop. At a global level, if ridership rose to 3.4 trillion passengers by 2050, cities and urban areas of intensive carbon-production could avoid over 2.56 billion tons of carbon dioxide.

It seems like an unbelievable number for an activity so scarcely done in the world of cars, capitalism, and efficiency, but that's because biking has simply not been properly implemented within cities. Widespread, interconnected networks of paths, intersections, and safe points of access on the road are all ways to encourage biking. It can become slowly woven into daily life, using things like bike-share programs, secure parking, or even workplace showers. Moreover, it can bring attention to urban development with little to no emissions, while returning economic and health benefits in full. No matter how one looks at it, the inclusion of bikes in urban infrastructure design is the first step to building a sustainable future.

SAFETY

The main concerns of bike infrastructure have always surrounded safety. But data and real life models from other countries prove that safety is assured, if not improved by the inclusion of bike infrastructure. The separation of bike lanes and roads reduces the chances of collision with both pedestrians and bicyclists. A Safety, Energy, and Environment director for the US's department of Transportation reported how bike infrastructure is able to significantly reduce the frequency of crashes and calms traffic. This is particularly effective when followed up by regulations to keep cyclists safe, like in the Netherlands where the speed threshold must be under 19mph to allow for mixed roads.

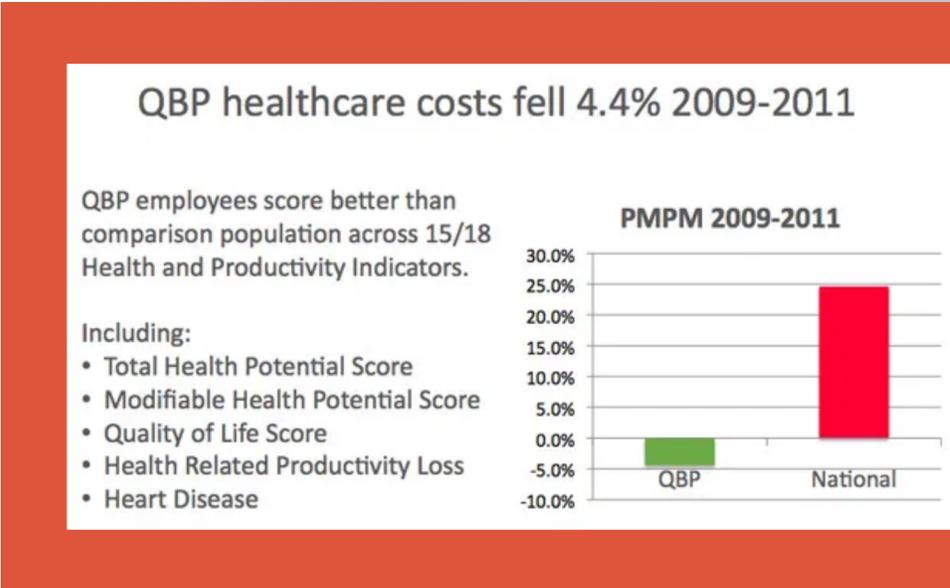


The Netherlands is a country that has successfully built a bike culture, where biking is as normal as walking or driving. Roads are organized and designed according to speed, and should there be any difference, things are built in for separation with things like barriers, planter boxes, or bollards. Even intersections are designed with a cyclist-only signal. In fact, children from the age 11 must take a course and written exam in order to show they can bike responsibly in public, which is an excellent way of implementing safety tactics and bike culture from a young age. Studies are clearly showing that including bike infrastructure consistently shows drops in collisions and injuries on the road by both cyclists and drivers.

ECONOMICS AND DEVELOPMENT

If we look beyond the safety and environmental concerns, bike infrastructure can have significant long-term effects from an economical perspective. The existence of bike paths has managed to raise startling improvements in developing areas. A study from the UNC Highway Safety Research Center show that people who walk or bike to a commercial area spend more money per month than those who access the area by vehicle. People are simply more likely to go to commercial districts using low-carbon transport if it is made to be more accessible (to bikers, walkers, wheelchair-users, etc.) and safe. This explains how adding bike racks and new lanes led to increased economic activity. These effects on local economies are well demonstrated by Indianapolis' Cultural Trail, which is a network of separated bike and pedestrian lanes. The trail was able to supplement dozens of struggling business districts and led to \$1 billion in increased property values.

It also allows for increased productivity, as a representative from USDOT points out how safe bicycling conditions are able to provide low-income Americans with opportunities to arrive at jobs, education, stores, and transit. Furthermore, it aids in dropping healthcare costs as well. QBP (a biking distributor in Minneapolis) incentivizes its employees to bike to work, costing the company about \$45,000 a year. They built in commonly-seen aspects of bike communities, including workplace showers and secure parking. The company's health care costs fell 4.4% in the first two years, saving about \$200,000 a year. In the same time period, other companies suffered an average 25% jump in health care costs.



GLOBAL WARMING

At last, the most prominent reason for the inclusion of widespread bike infrastructure is its dramatic effect on greenhouse gases. In this fast-paced world, convenience is key; thus, by making biking more easy to access, you begin to bring people from the smoky roads to the convenience of a bike path straight to **to your local grocery store.**

"AT A GLOBAL LEVEL, IF RIDERSHIP ROSE TO 3.4 TRILLION PASSENGERS BY 2050, CITIES AND URBAN AREAS OF INTENSIVE CARBON-PRODUCTION COULD AVOID OVER 2.56 BILLION TONS OF CARBON DIOXIDE."

In addition to that, the time spent plowing natural land for roads is not worth the simplicity of creating bike paths--ones that don't damage the established ecosystems. Bicycle infrastructure could also provide for flexible and environment-friendly designs that include tree-lined pathways and parks. And the effort wouldn't be for nothing--in fact, if people initiated these infrastructure efforts right here in 2020, then by 2050 we will have aided in reducing nearly 2.56-6.65 gigatons of carbon from the atmosphere. The course of the world's climate crisis could be changed in a matter of 30 years. Of course, the implementation of bicycle infrastructure will take time, but if more and more people turn to biking, efforts will be heard and the change is bound to come. As it was aforementioned, building a bike culture in one's community could end up leaving lasting changes on the planet. We could live in a world where learning to live sustainably becomes another thing you learn in life--just like riding a bike.



RECYCLING CRISIS

By Abigail Strofer

The United States has reached a breaking point. We are in the midst of a recycling crisis at a time where we are generating more waste than ever before. In 2017, we created 267.8 million tons of waste, nearly 4.51 pounds per person per day. Recycling is a universally confusing process that is largely misunderstood, and now with new policies, heightening prices, and high contamination levels, the United States is walking a tightrope.

After World War II ended, plastic saw a huge boom. The opportunities for this lightweight, durable material that made life more efficient and easier seemed endless. However, after household waste continued to grow unchecked, a mass movement spreading the importance of recycling took hold during the 1970s. Companies had to come up with a way to make recycling appealing in order to keep selling plastics and improve the public image of the material. They ran ads focusing on the public's role in waste creation instead of the industry's, specifically pushing the message of not littering, funded a recycling pilot project, and created an identification code inside of the easily recognizable chasing arrows recycling symbol. The problem with this code however, is that it gives the impression that all these materials are actually being recycled.

No more than 10% of plastic has ever been recycled. Crazy, right? This is because according to the National Waste and Recycling Association, 25% of what ends up in recycling bins is actually contaminated. A "contaminated" material, such as most plastic packaging, mixed plastic and paper materials, and containers with food residue cause good recyclables to become contaminated as well. The process to remove contamination drives up the cost of recyclables and therefore prevents manufacturers from using these recycled materials. They instead turn to Virgin materials, brand-new plastics straight from gas and oil out of the ground, that are much cheaper for companies than recycled materials are.



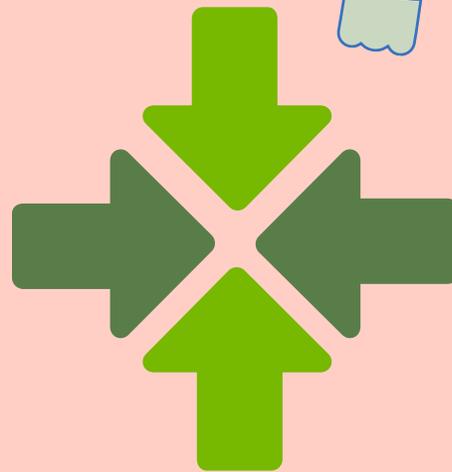
Additionally, most mixed plastics, which mainly include everyday packaging items, are technically difficult and costly to recycle, so they eventually end up in landfills. "Recyclable items" are not economically profitable to recycle. It is too hard to recycle some plastics, even if they aren't contaminated, so they just end up cluttering recycling companies and are often the source of contamination. Some materials or packaging might have the recyclable symbol on it because they can be technically recycled in a lab, but no company will actually be able to recycle it. Oil companies have been trying to trick us for decades and it has succeeded.



Recently, the United States has found itself in even more hot water, as China, who used to take the majority of the United State's plastics, implemented the "National Sword" policy in January 2018. This policy bans 24 types of paper and plastic from being sent from the United States to China, and also requires a higher grade of cleanliness (only .5% contamination) in order for them to accept the recyclables. Their motive is to push back against too high levels of contamination in the recyclables, reduce their carbon footprint, and revolt against its long time role of being the world's trash collector.

This leaves American companies with 2 options: 1. Pay a higher rate to pass off the recyclables to other buyers or 2. Get rid of them. In most cases, the latter option is the only one that these companies can afford. In California, more than 100 recycling centers and processing plants have already closed down, simply from not being able to afford the high prices buyers are proposing to take the recyclables off their hands. Now that China is refusing to take our recyclables, we are also left scrambling to find new international buyers. In 2018, the shipments of American recyclables to China had gone down 36%, and had more than doubled in India, Taiwan, Indonesia, and Vietnam, who simply don't have the capacity to handle our recycling on top of their own. The worst case scenario with this new policy threatens the existence of recycling programs.

The situation is dire, there's no getting around that. However, this is not a situation that the public can not fix on their own, we need transparency and accountability from the entire industry and every corporation. Starting now, our priorities need to shift and we need to turn the focus onto *reduce*, not necessarily recycle.

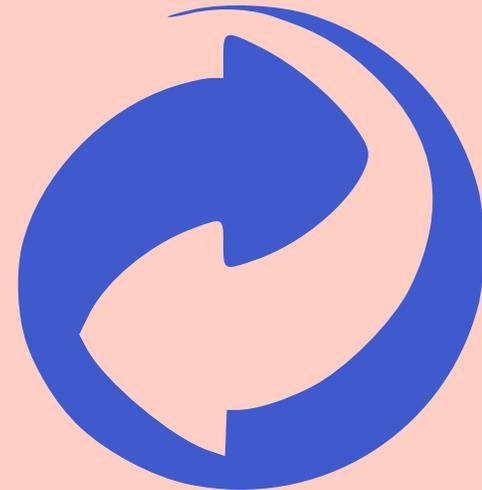


Reduce First

Reduce by buying goods with less or no packaging. For non perishable goods, buy in bulk. This can include foods like flour and bean but also gallon shampoo and lotion. Consider investing in some long term reusable products or kitchenware! An insta pot can make yogurts, beans and a bread machine will pump out loaves easily.

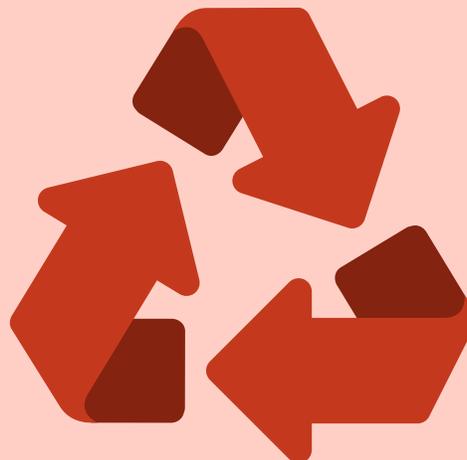
Then Reuse

If you cannot reduce your material waste then give it as many lives as possible before dumping or recycling. Plastic bags from stores or paper towels can serve as garbage or dog poop bags. Glass jars become containers or DIY gifts. Food packaging can be washed and reused.



Recycle Last

90% of recyclables will end up in the landfills due to contamination and lack of market. If you recycle, do it right. Wash out your jugs, bottles, cans and tear off the surrounding paper/plastic. Most importantly *don't* recycle everything with a symbol. Mixed materials and small plastics often will hinder recycling facilities.



GREENER HOLIDAYS

Reduce your environmental footprint this season!



ASK FOR A DONATION RATHER THAN A GIFT



SAVE GIFT BAGS, TISSUE PAPER, AND BOXES TO REUSE THE NEXT HOLIDAY SEASON



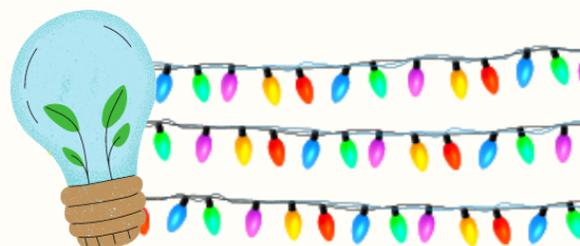
EXPERIMENT WITH PLANT-BASED MEALS



REDUCE YOUR HEATER USE BY BUNDLING UP OR USING PORTABLE ELECTRIC HEATERS



GIVE ECOFRIENDLY PRODUCTS AS GIFTS! SHAMPOO BARS, UTENSIL KITS, SILICONE STRETCH LIDS, AND MORE!



SWITCH TO LED LIGHTS AND OTHER ENERGY EFFICIENT DEVICES!



EXCHANGE UNWANTED CLOTHES/ITEMS WITH FAMILY AND FRIENDS OR BUY SECOND HAND!



MAKE DIY GIFTS! YOU CAN EVEN UPCYCLE OLD JARS AND MATERIALS AROUND YOUR HOUSE

THE LIFE AND DEATH OF AN EGG LAYING HEN

Written and photographed by Alexi Lindeman



PUBLIC DOMAIN

I do not remember exactly when my sister Andie and I first wanted to get chickens, but I believe it was back in middle school when my uncle got chickens of his own. Our mom has always adamantly opposed our proposals and we weren't able to adopt chickens until this October. Sometime between then and now, my oldest sister Andie and I became more aware of the ethical and environmental consequences of animal products.

Most egg-laying hens are raised in CAFOs (concentrated animal feeding operations). These are concrete and steel prisons whose goal is to produce animal products; in this case, eggs, as quickly, cheaply, and profitably as possible.

A chick's life begins under a heat lamp rather than its mother among hundreds of others. They are then separated by gender. The male chicks, unable to lay eggs, are worthless thus sent off to die either by being ground alive or suffocated by CO₂. The female chicks are then debeaked—the tip of their beak is cut off—which causes severe pain short term and chronically as the sensory nerves extending throughout the beak are severed.

One hundred years ago, farmers began tightly packing hens in raised battery cages so they could stack the cages for space and make egg collection easier as the eggs could roll to the front when laid. If you are a visual person, here is a short video of battery caged hens. Each hen is only allotted $\frac{2}{3}$ of a piece of printer paper. The close proximity coupled with the severe stress they are put through causes the hens to peck each other to death—debeaking will help prevent this. In these battery cages, hens do not even have enough space to spread their wings and often become stuck between the wiring, die and rot in the cage while the rest are forced to live on top of the corpse. These chickens are also deprived of their other natural habits like dust bathing, roosting, and nesting.



Dust bathing is what it sounds like. Hens love rolling around, fluffing up their feathers, and thoroughly coating themselves with dirt for surprisingly practical reasons. They can get very oily so the dust will help absorb it. The dust will also choke any mites or fleas in their feathers. If a bird is deprived of dust bathing, like those in battery cages, they will be more vulnerable to parasites and their oil will dramatically build up. For this reason when these birds are exposed to dirt, they will dust bathe far longer and harder to make up for all of the dust baths missed.

In order to nest, hens naturally seek out an isolated soft place for their eggs. But in battery cages they are stripped of all privacy and comfort. Forced to lay eggs out in public, exposed to the world, hens frantically try to duck beneath their cage mates to no avail.

Dust Bathing

This was the girls' first time in our backyard and they absolutely loved the redwood mulch! All day they would dig, roll and play around in the dirt, then puff their feathers when they were done and a cloud of dirt would halo their bodies.

After just under two years—of living day after day, in cramped cages sticky with feces and decayed corpses, lacking feathers from parasites crawling over their bodies, mentally broken from the deprivation of dirt, privacy and ability to run, fly or stretch their wings, and physically abused by the blade which removed their beak, the wire cage which gave their feet sores and from being extensively bred to lay over 250 eggs a year compared to their ancestor's 24—they are sent to die. Workers roughly grab the hens and throw them in crates on a truck. Oftentimes their legs and wings break during this process as their bones are fragile from the lack of calcium—calcium used for egg shells. At the slaughterhouse, the chickens are hung upside down, leading to more broken bones, and dunked in electric water to stun them before their throats are slit and left to bleed to death.



Snacks not Scraps

They eat everything! Yard clippings, pumpkin seeds, bread crust, apple cores, potato peels, flies, pincher bugs, slugs all disappear when offered to the chickens. To replenish their calcium we even crush up their egg shells and give to them. Now whenever anyone enter the chicken run, they all scamper down, anticipating a treat.



MEET THE CHICKENS



SUNNY

She's the most friendly of the chickens and hops on my shoulder when I'm in the coop.



HARRIET T.

Somehow Harriet always manages to fit into the tightest spaces. (shown above)



MAGS

The shyest of them all, she skirts away at the slightest sign of danger.



DOROTHY H.

We call her Dot for short. Whenever there is food, she is the first one there.



NUGGET

She's best friends with Sunny and likes to sleep away from the rest of her sisters.



RUTHIE B. G.

Despite being the smallest, she's the feistiest hen. Just like her namesake, she doesn't let her size define her big personality.



**RECIPE OF
THE MONTH**



STUFFED YAMS

Ingredients

Sweet potatoes (medium-sized) 4-6

FILLING

Olive Oil 5 tsp for sautéing
Carrot (chopped in small cubes) 1
Red onion (diced or thin strips) 1
Garlic (crushed) 1 clove
Sweet corn 1 can
Kidney Beans 1 can
Tomato Sauce 1 can (2-3 cups)
Water or stock 1/2 cup
Spinach (semi chopped) Add to preference
Salt 1 tsp (to taste)
Pepper 1/4 tsp (to taste)
*pinch cumin and chili flakes for spice

JALAPENO AND CILANTRO SAUCE

cashews 1 1/2 cup
water 1 1/4 cup
cilantro 1/2 cup
yellow onion 1/2 cup
jalapeno ***mild spice*** 1/2 of one
lemon juice 1 tablespoon
salt 1 teaspoon
coconut milk ***to reduce spice*** 1/2 cup



Directions

FILLING

1. Sauté the onion, carrot, and garlic until onion is translucent, the carrots can be crunchy
2. Add in the corn, kidney beans, tomato sauce, and water
3. After the mixture is hot, add spinach, salt, and pepper to taste

JALAPENO AND CILANTRO SAUCE

1. Soak cashews for 30-60 min ***soak overnight if you do not have a vitamix***
2. Add all ingredients to a Vitamix and blend until creamy and smooth.
3. Taste and adjust seasonings to your preference.
4. Store in an air-tight container in the refrigerator for a week



VEGATERIAN RESTAURANTS

Richmond

THE VEG HUB ||\$\$|| ★★★★★

An impressive bistro-style restaurant that is legitimately focused on reducing their carbon food print of meat by creating 100% plant-based dishes. Part of the money from customer purchases goes into their nonprofit, which is used towards running cooking classes and providing food to those in need. Be sure to check out the vegan Philly Cheesesteak and that rare vegan Mac 'n cheese!

VEGAN 'N CHICKEN ||\$\$|| ★★★★★

This is one of the few Indian-Pakistani restaurants that offers vegan meat and extra vegetarian options! It's also received many references by other vegetarians for its authenticity and veg alternatives for popular Indian dishes.

AMY'S DRIVE-THRU ||\$\$||

Another Instagram-worthy area is Amy's Drive-Thru, a American-cuisine with vegetarian alternatives for every single menu item.

Antioch

INDIA 4 U ||\$\$|| ★★★★★

A South Indian restaurant, which ensures zero meat options and great, flavorful veg options. Step outside typical meat-based Indian dishes and delve into new types of dishes!

FALAFEL TOWN ||\$\$|| ★★★★★

For the Mediterranean and Middle Eastern cuisine! It's a good way to try falafel and other foods with fresh yet hearty ingredients. It should be noted Mediterranean cuisine is typically fresh and contain many solid vegetarian dishes.

ISSARAP ||\$|| ★★★★★

A small business in this area to consider includes Issarap. It offers delicious-looking wraps, sandwiches, and other comfort foods that may interest both vegetarians and pescatarians alike--be sure to check them out soon if you're considering the vegetarian diet.

GO VEGAN ||\$|| ★★★★★

Go Vegan is yet another Asian-based vegan restaurant, and is reputed to be quite generous in portions. The menu is vast, and they also offer a multitude of drinks to choose from.

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