



The Food Forest Connection

or, The Power of Food Forest Community Gardens to
address unsustainable food, environmental, and
sociocultural practices



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About Me

- Licensed Professional Counselor in the state of Missouri
- Lover of hiking, foraging, connecting with nature, lover of good food and good friends to share it with
- Therapeutic Horticulturist-in-Training





How Can Food Forest Community Gardens Help Address Unsustainable Practices?

01

Food

Everything from what we eat and who gets to eat it, to what it's doing to us and what to do about it

02

Environmental

Yards, gardens, the health of the planet and everything that calls it home

03

Sociocultural

The ways in which we interact with ourselves and others in the modern world, the impact, and where we come from here

The Food Forest Connection

We'll explore each subject through the lense of The Food Forest Connection, a community program by Independence, MO non-profit, West iNd Connection





01

Food

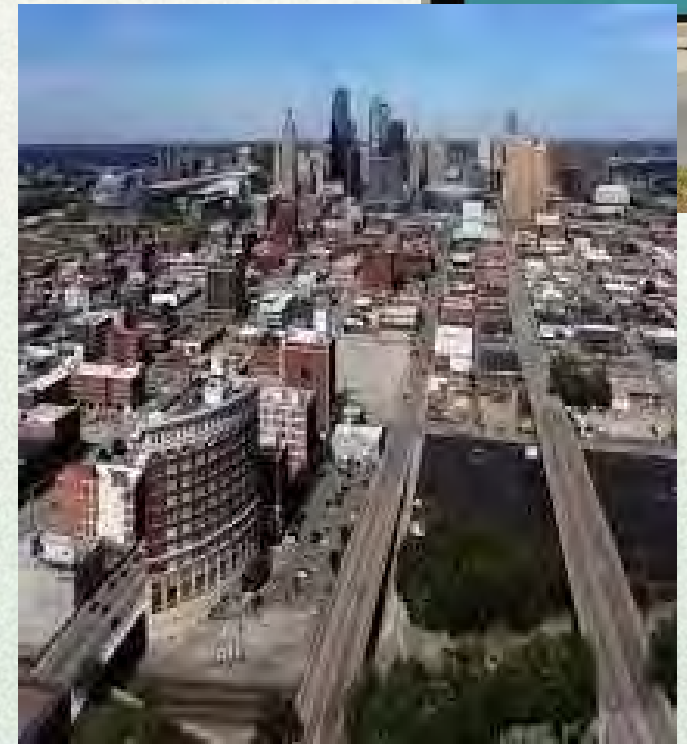
Daily reality for all, a daily struggle for far too many





Food Insecurity

- Food insecure population in Jackson County, Missouri: 81,950
- Food insecurity rate in Jackson County, Missouri: 11.5%
- Estimated program eligibility among food insecure people in Jackson County, Missouri:
 - 53% of food insecure people in Jackson county are above the snap threshold of 130% poverty
- The annual food budget shortfall for Jackson County: \$56,188,000.






Food Insecurity in LGBTQ+ Communities


Results for **Independence, MO** · Choose area

Independence Missouri Food Pantries UPDATED May 14, 2023

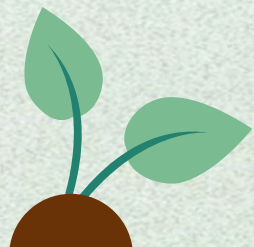
- Abundant Life Church. ...
- Christ United Methodist Church Community Kitchen. ...
- Community Services League Food Pantry. ...
- East Independence Church of Christ Pantry. ...
- Grace And Truth Church. ...
- Lunch Partners Community Kitchen. ...
- Mercy Meals Outreach East Side Baptist Church.

[More items...](#)

- LGBTQIA+ individuals and families have long experienced higher rates of hunger and poverty than non-LGBTQIA+ individuals and families. And some community members, including young adults, young adults, women, and Black, Latinx, American Indian, and Pacific Islander LGBTQIA+ people, experience even higher rates.
 - 27.6 percent of transgender adults reported not having enough to eat, according to the Food Research and Action Center.
 - In May 2023, 15 percent of LGBT adults and 19.3 percent of transgender adults who identified as another sexual orientation (e.g., intergender) reported not having enough to eat, compared to 10.4 percent of non-LGBT adults.
 - 14% of LGBTQ+ individuals have avoided a faith-based community at one point or another.
- 



**So, not everyone has enough to eat, but what's worse
people do have to eat is contributing to serious illness
preventable loss of life**



Chronic Food Illnesses



- 1,600 Americans die *every day* from chronic illness, such as obesity, diabetes, heart disease, and cancer.
- According to Harvard Public Health, “About 678,000 Americans die each year from chronic food illness. That toll is higher than the number of combat deaths in every war in American history—combined. That’s right: there are more deaths *each year* from our food than all the deaths from the Revolutionary War through World War II, the Vietnam War, the Korean War, the Persian Gulf War, the wars in Afghanistan and Iraq.”
- “...evidence has mounted that these chronic illnesses are caused by deleterious substances in ultra-processed foods.”



Effects on Mental Health

- One of the biggest health impairments is society's reliance on processed foods. These foods are high in flours and sugar and train the brain to crave more of them, rather than nutrient-rich foods such as fruits and vegetables.
- A lot of the processed foods we eat are highly addictive and stimulate dopamine centers in our brain, which are associated with pleasure and reward. In order to stop craving unhealthy foods, you've got to stop eating those foods. You actually start to change the physiology in the brain when you pull out the sugars and refined carbohydrates from your diet.
- Sugar and processed foods can lead to inflammation throughout the body, including the brain, which may contribute to mood disorders, including anxiety and depression.



Lack of Diversity in the Gut Microbiota

- The microbiota can influence complex behaviors, such as learning, stress, depression and anxiety (Cryan et al., 2019), leading researchers to conclude that the status of the brain may be influenced by inflammatory processes, which are strongly related with the brain-gut microbiota communication.
- Eating a variety of diverse foods, and specifically eating pre-and-probiotic foods, is essential to maintaining a healthy microbiome.

Unsustainable Food Practices



Energy/Resources

Massive amount of energy and resources to store and transport foods around the world



Fake Food

Ultra-processed foods are causing preventable illness and death



Food Insecurity

No one should have to choose between paying the bills and putting food on the table



Food Waste

According to the EPA, 30-40% of all available food in the US gets thrown away. For reference, a head of lettuce can take up to 25 years to decompose in a landfill



Loss of Nutrition

Eating Non-Locally means eating food that's already experienced loss of nutritional value, flavor, etc



Polluted Food

Monoculture farms often create polluted food (not knocking out pesticides through increased use of pesticides) through increased use of pesticides and herbicides needed to combat pests and mention microplastics

How Food Forest Community Gardens Help Address Unsustainable Food Practices



Energy/Resources

Reducing energy waste benefits the planet that produces our food, but each gardener also spends less of their time dealing with the problems of traditional gardening allows them to focus more on maximizing yields



Food Waste

Food forests are all about building up the health of the soil, and that means composting. Lots of it. This protects the environment, turns a waste product into black gold, and creates a cycle that keeps valuable biomass on the property. Waste not, want not.



Real Food

Teaching kids to appreciate real food early often contributes to greater diversity in diet in adulthood



Nutrient-Dense

They say you've never had a strawberry until you've had one fresh from the garden. Food forests can help you get the most from your food!



Food Security

Give a person a zucchini to eat for a day, but teach them to garden, and the whole neighborhood gets to eat



Clean Food

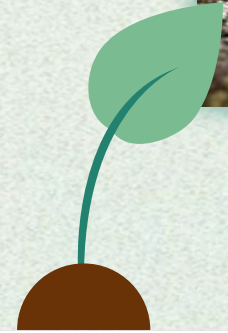
Polyculture gardens, like food forests, that minimize produce loss with fewer herbicides and pesticides (or at least the same levels), and also purposefully provide food sources for vital species for crop pollinators



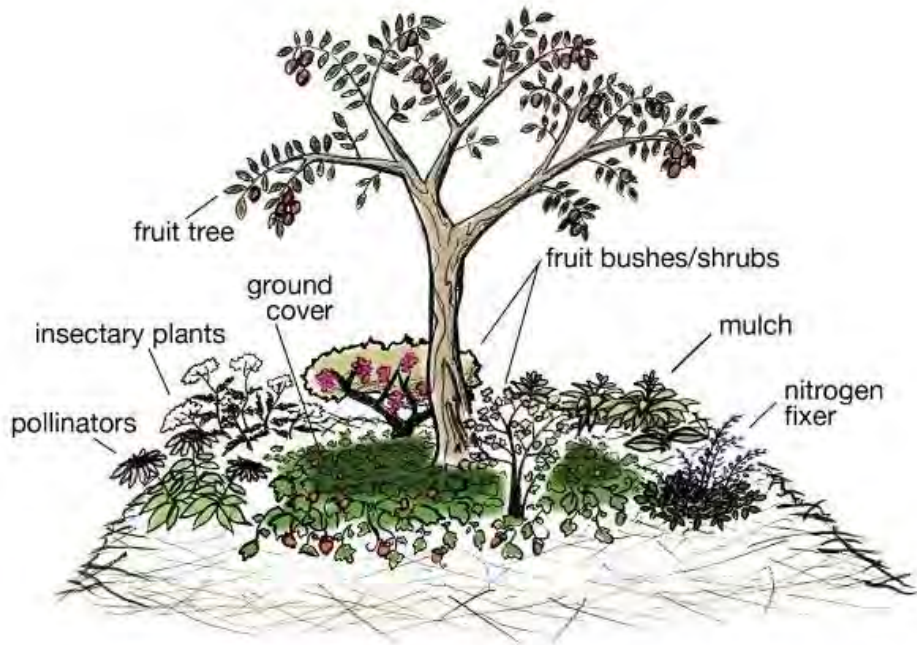
Whoa!

Before we go any further, let's take a little about the Food Forest Connection and how it fits into this.

So, to start, The Food Forest Connection is...a food forest



What is a food forest?



FOOD FOREST PATCH

A food forest, also called a forest garden, is a diverse planting of edible and medicinal plants. It attempts to mimic the ecosystems and processes found in nature.

This method of gardening will allow us to address food insecurity for our neighboring communities by allowing us to grow a greater diversity and abundance of food with less effort, partly by helping us reduce the inputs that we have to contribute to the system.



What is a food forest, cont'd

Forest garden design can reduce inputs in various ways, including:

- placing emphasis on trees, shrubs, perennials, and self-seeding annuals,
- planting thickly and using ground covers to shade soil and suppress weeds,
- utilizing nitrogen-fixing and nutrient-accumulating plants, chop-and-drop techniques, and returning wastes to the land to create healthy soil rather than applying fertilizer,
- planting a diverse array of plants that attract beneficial insects to pollinate the fruit crops and keep pest populations from exploding and causing damage,
- utilizing several ground-shaping techniques to keep rain water on the site, and
- designing for placement of plants to create micro-climates and windbreaks.

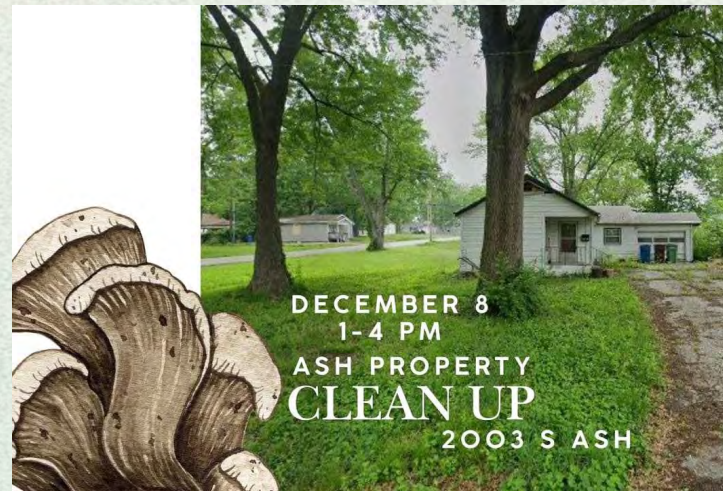


The Food Forest Connection

Located in a disadvantaged area in Jackson County, MO according to the EPA, The Food Forest Connection is a group-production community garden that utilizes principals from therapeutic horticulture to create an accessible garden where people can rest and recharge in addition to connecting to others, nature, and the sources of their food.

A community program of West iNd Connection, The Food Forest Connection fits well within the core pillars of the **arts** (hello garden design, flower arrangements, sculptures, wild-foraged clay pottery, painting classes, and more!), **animal welfare** (food/shelter/habitat restoration, pollution-prevention, etc.), **lgbtq+** (community gardens bring communities together, and can provide direct support and care to those in the lgbtq+ communities around Western Independence and Jackson County), and **community care**

(if bringing people a diverse group of people together in community and teaching them how a diverse grouping of edible and medicinal plants could help fight climate change, take care of their neighbors, and be one of the best hobbies they've ever had While giving food to people experiencing food Insecurity isn't community care, I don't know what is)



WEST
Conne

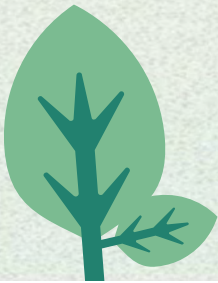
Arts LGBTQ+ Animal We

West iNd Connecti
non-profit organiz
to create a safe an
community for all
and visit. We aim t
positive progressiv
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members of our ci
programs, neighbor
and public events.
explore all possibil
partnerships that s
programs in our co

The Food Forest Connection

- Therapists trained in TH will provide therapy groups utilizing the inherent therapeutic value of working with plants
- We'll work with a variety of school groups, allied professionals, and other groups to bring the joys of gardening and community to all through use of accessible garden design principals and accessible gardening tools that can help anyone have an easier time gardening
- Everyone who participates in the garden can feel good knowing that the majority of all food grown will be given directly to people experiencing food insecurity. Simply hanging out and learning to garden will do good for the community

- Rather than having to commit to purchasing gardening tools and supplies, people can come to garden in community for free, attend classes, groups, and workshops to learn more related to gardening, food security, and nutrition, as well as regular opportunities for social connection
- We're working to create a vocational training program in horticulture
- Between our indoor and outdoor growing spaces, we'll be running a year-round program





The FFC

01

Food Forest

Fruit and nut tree guilds with a variety of edible and medicinal plants

02

Hydroponics

Indoor and outdoor hydroponics setups (towers, bucket systems, etc.) running year-round

03

Mushroom

Mushroom logs, buckets, greenhouses, and diatomaceous earth in our garden beds

04

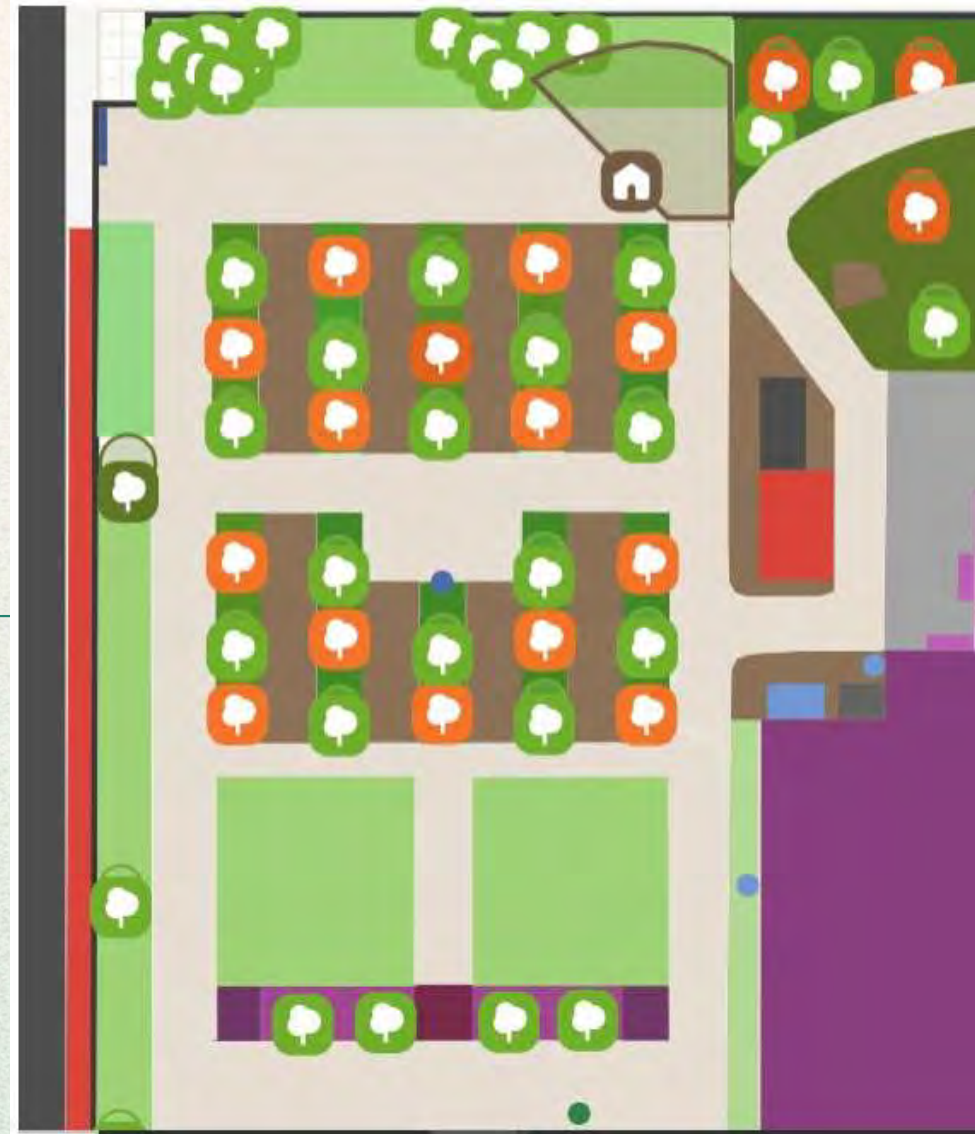
Raised Beds

A variety of accessible raised bed planters that can be moved around and adjusted in height to suit our preference (or the Sun's!)

05

Community Center

/Outdoor Classroom/Art Space/Safe 3rd space/So much more





Environment

Empty yards, food scraps, eating local; all p





Better than watering and mowing an unused



Most lawn equipment is gasoline powered, typically being of two-stroke or four-stroke engines. To fuel this equipment, it takes 17 million gallons of gasoline annually, with 17 million additional gallons of oil used in the process. Two-stroke engines pose a unique environmental problem because they do not have an independent lubricant system, and the oil and gasoline are mixed. Due to this, about 30 percent of the fuel does not burn completely, thus releasing toxic gases into the air.

A 2014 study examined the VOC (combination of harmful gases) emissions from two stroke scooters, and it was found that the levels of emissions were 10 times higher from an idling scooter than from a car or truck. Two-stroke engines are also used in some equipment, and while they are more environmentally efficient, in total, they are also harmful. A four-stroke lawnmower operating for one hour equates to a vehicle traveling 100 miles.

According to a study done by Quiet Communities, this equipment is responsible for the release of 26.7 million tons of pollutants



You help increase local biodiversity, improve health, and aid in carbon sequestration, all of which are crucial for combating climate change.





Less Food Shipped in from Around the World

Local food contributes far less to greenhouse gasses, air pollution, and fuel consumption, once again fighting climate change (plant choice and methods matter, but still overwhelmingly true)





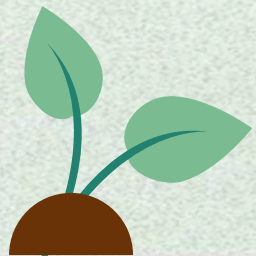
Less Pollution from and Reliance Upon Plastic Herbicides, Pesticides, Etc.

- Focus on perennial plants leads to less purchasing of new seedlings each year and therefore less seedling pots and flats, so often made of plastic.
- Focus on refurbishing and caring for gardening tools leads to less plastic waste from premature wear that breaks down into microplastics, just like old shoes. Adaptive gardening strategies lead to less wear and tear on our bodies and tools that we don't want prematurely wearing down, either.
- Interplanting strategy of food forests contributes to less use or even elimination of pesticides and herbicides, and need not be (you grow your own) wrapped in plastic to be delivered to the consumer.

03

Socio-Cultural

Our rhythms of life have increasingly disconnected us from ourselves, others, nature, and the sources of our food





**Part of the Problem is that People are Increasingly
Disconnected:**



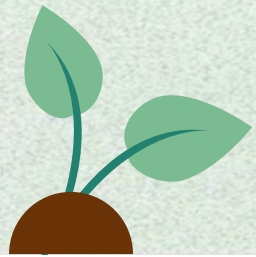
**From
Themselves**



**From
Others**



**From
Nature**





People and Plants

- Research from Environmental Psychology, Evolutionary Psychology, and Ecopsychology stresses the interconnectedness between people and plants.
- Studies have shown that time spent in nature improves mental health and that disconnection from nature is connected with illness.
 - Less pain in hospital patients who have a window with natural views
 - Video game addiction in children and adults, screen time shown to have detrimental effects on child development
 - Biophilia Hypothesis, Nature-Deficit Disorder





Gardening and Health

- Physical Health (food, fresh air, exercise)
- Social Health (social bonding, freedom of expression, community practices)
- Emotional Health (stress reduction, creative outlet, source of beauty)
- Spiritual Health (creates opportunities for worship, reflection, awe)
- Cognitive Health (learning skills for livelihood)



Community Gardens as Violence Reduction

- Recent studies have explored the health benefits of nature and how green space supports environmental justice while reducing community violence.
- Research published in 2022 analyzed data from the 301 largest cities in the United States to investigate the relationship between different types of crime and urban green space. The study found that greater amounts of green space were associated with lower incidences of property theft and fewer violent crimes.

<https://www.neefusa.org/story/health-and-environment/how-greening-communities-can->

The Impact of Community Gardens on Neighborhoods

Community gardens are shared spaces where neighbors unite to tend to a garden, providing their community with fresh food, educational opportunities, and a sense of community.

- Nutritional Access**
Regular access to fresh, healthy foods helps prevent negative health outcomes in children.
- Environmental Impact**
These gardens contribute to urban greening, supporting local ecosystems and biodiversity.
- Community Engagement**
Community gardens foster inclusivity and build strong neighborhood connections.
- Safety**
Well-maintained community gardens have been shown to reduce violent crime and gun violence, creating safer neighborhoods.
- Expanding Access**
Community gardens introduce children to a variety of fresh foods, encouraging adventure and a love for fresh produce.

NEEF National Environmental Education Foundation



Gardening and the LGBTQ+ Community/ties

- LGBTQ+ people experience mental health concerns while also exhibiting resilience. A potential means of promoting well-being is mindful interaction with nature or plants. However, most research in this area focuses on heterosexual, cisgender individuals.
- In one study, researchers explored the experiences of 25 LGBTQ+ people who identified as plant parents or gardeners.
- Findings indicated meaningful benefits, including ways in which plants fostered connections and relationships, promoted well-being, and encouraged participants to be mindful and grounded.
- <https://www.tandfonline.com/doi/full/10.1080/15401383.2024.2376254?src=>



Gardening and the LGBTQ+ Community/ties, Cont'd


- In addition to being a moral imperative to ensure that, as public gardens, any community garden initiative is inclusive toward people of diverse members of LGBTQ communities, it is vital to recognize that this diverse group of communities offers important perspectives that are critical for survival in the face of climate change and other challenges humans have created. Those perspectives are intimately shaped by the relationships queer people form with each other and their environments--they create chosen families and intentional communities and connect across differences. Their relations and very existence are shaped by their context – by their history and political realities, by where they live, and so much more. All of these lead to unique ways of knowing that can help public gardens be more inclusive. They have the knowledge and experience to build relationships and coalitions, to empathize with others who suffer and who love, and to re-imagine the world in ways necessary to avoid the worst that climate change could bring.
- Can you imagine how the FFC will benefit from not only being inclusive toward, but led by a community of Independence through West iNd Connection? How Independence as a whole can benefit from a truly inviting, truly open community of people committed to growing food, and people, together?

So, what's next for the FFC? How can I

We're working on developing our site for accessibility, security, and working on getting trees and shrubs. If you have any resources (knowledge you can share, other connections you should make that we don't know about yet, want to support financially, desire to contribute to transform the site), we'd love to hear from you! Reach out to me directly at cjpearman1@gmail.com or Jennifer Edmonson at jedmonson@westindconnection.com



Resources

- 
- <https://westindconnection.com/>
 - <https://map.feedingamerica.org/county/2021/overall/missouri/county/jackson>
 - <https://harvardpublichealth.org/policy-practice/processed-foods-make-us-sick-its-time-for-government-acti>
 - <https://www.sutterhealth.org/health/eating-well-for-mental-health>
 - <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2023.1215674/full#ref22>
 - <https://independence.zone/food-pantries/>
 - <https://frac.org/blog/lgbtqia-hunger-2023#:~:text=Hunger%20in%20LGBTQIA+%20Communities&text=1202023%2C%2015%20percent,transgender%20or%20non%2Dbinary%20people.>
 - <https://www.foodforestcc.org/stories/how-do-food-forests-sequester-carbon>
 - <https://psci.princeton.edu/tips/2020/5/11/law-maintenance-and-climate-change#:~:text=Most%20lawn%2020is%20gasoline,up%20truck%20or%20a%20sedan.>
 - <https://foodforestabundancemn.com/transform-your-lawn-into-a-thriving-food-forest/?srsltid=AfmBOoos7n5jIYlkFVPhG-FO-Lg6gzg77Pq3JVkUOrqp17>
 - <https://www.tandfonline.com/doi/full/10.1080/15401383.2024.2376254?src=>
 - <https://ecommons.cornell.edu/server/api/core/bitstreams/13bb3a52-ea87-4a5e-9fa3-a8563d2ba93d/content>