Technocracy Inc.
TREND EVENTS NEWSLETTER

FALL 2016

Eco housing, Iguanas, Urbanates, Indigenous Communities and Technocracy, Energy Economy, all this and more in this Quarter's newsletter.

Tiny houses a form of Eco-Housing

by Catherine Sheard

Tiny houses tend to be more ecologically friendly and assist in living sustainably than full size houses due to their smaller environmental footprint. People who choose the tiny home lifestyle often have an interest in sustainable resources. Many of these houses incorporate reclaimed materials, solar panels, composting toilets and reusable

gray water into their design and build. Some add aquaponics with sustainable plants and fish, while others attach a chicken coop to the back of the home. There is an increasing trend of tiny home owners who want their house to be set up to live off the grid - to have Eco-friendly housing.

Americans often spend 30%-50% of their income on a mortgage payment for their home. This equals around 15 years of working just to pay the mortgage, and as a result almost 75% of Americans are living paycheck to paycheck. An alternative is to live more 'eco-friendly'. While tiny house living is not the lifestyle for everyone, we can learn from the concepts and apply them to live in a sustainable way and also to escape the cycle of debt. Tiny houses are built to last as long as traditional homes. They are aesthetically similar to larger homes and use traditional building techniques and materials. Tiny houses are often purchased for cash to avoid the financial burden of a mortgage or loan. The general cost range is $20,000 to $50,000 for the building alone.

An average American home is 2,600 square feet, while a tiny home is usually between 200 and 400 square feet. The styles range from wood cabins and stylish cottages to sleek modern or industrial themes. They can be built in several ways including permanent foundation, flatbed trailer, house boat, converted school bus, or modified recreational vehicle or trailer.

Most tiny houses maximize function and style with customized features to meet individual needs, tastes and preferences.

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Many people choose tiny home living to gain more leisure time and freedom. In addition to the financial savings, there is less upkeep on the house and yard. Using the land space one would normally use for decorative landscaping can be utilized as food and energy cultivation further assisting in the sustainability and debt-free lifestyles. Other people set up to work remotely while on the road or travel around the U.S. for work assignments.

Small built housing is an issue in many states since there is little regulation or oversight on the build quality of the homes. Portable tiny houses that are built on flat bed trailers often continue to use their trailer license rather than get the home certified as a recreational vehicle. Some mobile home and recreational vehicle parks allow tiny houses to rent pad space, however many do not because they only allow licensed recreational vehicles.

Many tiny houses are built or parked on private property as an accessory dwelling unit. These are popular with young adults as a first home and elderly parents as an alternative to assisted living institutions. There is significant variation between counties and cities regarding the use and categorization of tiny houses. Many communities embrace the idea, others see it as a threat to their tax dollars, and some are just trying to figure out how to regulate and categorize this new trend in eco-friendly, sustainable housing.

Weaving a Future

By Shamania James

In Spring 2016, Technocracy Inc. organized a think-tank group to develop a transition plan for a more stable society. The open-ended conclusion was that societal problems had potential solutions reflected in the paradigms of nature and geometry. It seems abstract, but by reevaluating the *linear* construct of the price system that drives our world and modeling alternatives based on the systems in nature that effectively address *similar* problems, we could begin planning towards action.

Since many environmental and social problems are due to economic drivers, understanding the importance of resources and their long-term effects has been critical. With the advent of climate change, ocean acidification, freshwater depletion, air pollution, dwindling biodiversity, and accelerating levels of disparity, the opportunity for change is now. We are not "reinventing the wheel", rather, looking at global issues from a different angle.

Technocracy is not a politically-affiliated group. This creates an interesting dynamic when working in areas of power that are structured around exclusivity and profit. So entwined are the modern systems of power with resource tycoons that it has been surmised the invisible hand of politics often moves in sleight at the behest of the largest pocket.

Part of my work this summer was spent analyzing the potential for energy-based systems in indigenous communities. Why indigenous communities?

The recent prairie occupation by the Standing Rock Sioux Tribe against the proposed Dakota Access pipeline is a concurrent example of the need for sustainable practice in economy.

From tar sands, to coal ports, to oil pipelines- the fight for rights to clean air, water, and land has been a persistent threat to minority groups both in America and globally. Indeed, the threat of a short-sighted industry extends far beyond tribal concerns when considering the impact of fossil fuel consumption and extraction. The ongoing water crisis in Flint, Michigan (since 2014) is a dark reminder of the modern potential of quick decisions based on profit. Now, more than ever, humanity needs to evaluate energy alternatives more seriously.

The perceived abundance of resources before a societal collapse has been the downfall of many advanced groups throughout history. The Rapa Nui people of Easter island committed perceivable ecocide when they deforested the island beyond repair. In a similar scenario, the mysterious disappearance of the early Mayans indicated prolonged drought and deforestation. The Anasazi abandoned Mesa Verde after drought and social disparity destroyed their agricultural practices. The takeaway is that good environmental stewardship and far-sighted leadership can forestall collapse even in delicate environments (e.g. Iceland and Japan).

The mutual interest between indigenous communities and Technocracy toward collaboration rests in Technocracy providing verifiable proof of their ability to network and establish sustainable systems in smaller communities. Not only does this approach encompass the original vision of a North American Technate, but it opens up the global platform through similar tactic. Drawing insight from researching the collapse of large empires and cultures indicates the value of having smaller specialized groups that interact with each other in observance to an overall long-term thinking plan. It is clear that larger domains can become unmanageable or overly centralized, making them vulnerable to corruption and therefore the entities become susceptible to collapse.

Sustainability is the key word here. Considering that Technocracy has thrived as a non-profit organization since 1933 reflects the sentiments of sustainability through adaptability across time. Many of the core principles behind technocratic governance have remained firm, yet, flexible in the sense that it parallels the evolution of technologies and issues from the early 20th century to modern era.

The collaborative pooling of critical minds capable of developing solutions to the pervasive effects of the vertical power structures that largely run the global market and politics needs to be increased and collaborative.

<u>It is important to reflect upon this visionary quote:</u>

"The Earth does not belong to man; man belongs to the Earth. This we know. All things are connected like the blood which unites one family. Whatever befalls the Earth befalls the sons of the Earth. Man did not weave the web of life; he is merely a strand in it.

Whatever he does to the web, he does to himself."

Chief Seath'tl

Iguanas?

by Wyatt Catron

Farming

Long known as the "chicken of the tree" the Green Iguana (*Iguana iguana)* provides a real option for sustainable agriculture. Understanding the evidence in favor of iguana farming is the first step to motivate policy makers and investors towards supporting these projects. The successes of small scale farms and iguana pilot programs should not be dismissed as a whimsical notion but rather embraced as the beginning of a truly sustainable perspective on the agricultural industry and reforestation.

Sustainability

Iguana farming differs from others means of reforestation because; "The reforestation efforts do not aim at creating virgin forest, but rather at providing those resources upon which the farmers depend. Reforestation with a diversity of trees attract other animals and thus create bio-diversity rather than monocultures."

Farming iguanas can provide an answer to economic concerns and provide a sustainable move towards more environmentally friendly agriculture practices. Iguana farming provides a solution for the forested regions of Central America. Not only does it aid in the protection of existing forest, but it also encourages farmers to reforest land once used for cattle in order to expand their operations**.**

This method is important because it uses economic factors to drive conservation. Closing off forests to people is only a temporary solution.

Eventually the "keep out signs" will come down and people will begin to use the resources available to them.

Sustainable conservation, like iguana farming, is a preferable strategy because it allows farmers to meet their economic needs in an environmentally friendly manner. (Warner 2013)

In the 1960's *Iguana iguana* was extremely common throughout the Pacific Mangrove Forest of Mexico, but by 1970 the population was reduced to just 5% of the original population. The Green Iguana's biggest threat is habitat destruction fueled by the agricultural industry. The most viable option to truly save the iguana is to eat them.

Economics

Iguana farming is not a new concept. The science journal ***Intercencia*** provided an economic analysis of iguana farming. Free ranging iguana need only a patch of clear land 20-50 meters in their natural habitat. A case example in Nicaragua showed that the average farm paid US $1,430 for 1,500 iguanas followed by $92/ year expenses and were able to sustain this population on an area of shared 14 acres. The farms received $9,000 from just their iguanas in 5 years.

This can be compared to cattle, where one square mile average 5-year yields are $53,333. Iguana yields converted to square miles would be 68,000 Iguana and $411,000 in those 5 years. Cattle are limited to a two-dimensional landscape. *(Cattle can't climb trees!)* To generate a high yield, cattle require over an acre of no tree pasture per cow and ~15 gallons of water a day.

Bio-Diversity

The iguana, however, must live in a healthy forest, drink very little, and have a beneficial rather than a destructive impact. The Green Iguana spends much of its time eating leaves and insects *(another bonus)* in their three dimensional biosphere.

Always Critics

Critics of alternative farming methods dismiss projects like iguana farming by flagging them as insignificant. To do so, they stress that the impacts caused by current practices are minimal and that adopting these kinds of strategies does not result in any sort of real change. This opposition is dangerous because it ignores real harm to people and the environment.

Food

Maybe we should put away the hesitancy (the 'ick' factor) about reptiles as a protein source.

Iguana farming could be the first of many new strategies for feeding the world's people without compromising long term environmental health and food security.

Iguana recipes anyone?

From City-State to Urbanate and Beyond

By Justin Lazzara

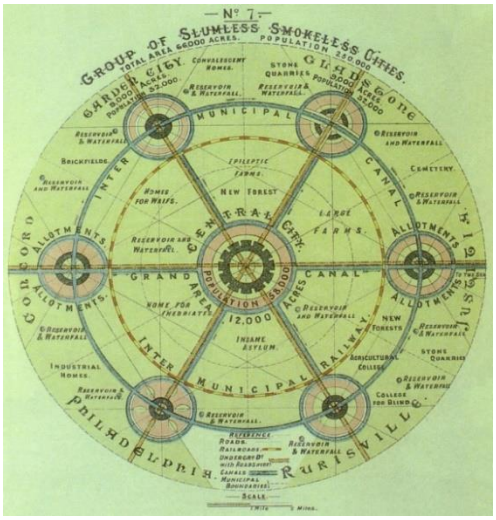
The earliest use of the term Urbanate (that I found) was in *Technocracy Digest, November 1955 by Wilton Ivie.* An Urbanate is a plan to solve the current problems of today's city. Urbanates would be small in size perhaps 20,000 to 100,000 people. Planned top-down design with pre-installed, integrated transportation, utilities, and communications. Community, safety, sustainability, and satisfaction would be the priority. Below is a quick visual history of this idea of the Urbanate in it various forms.

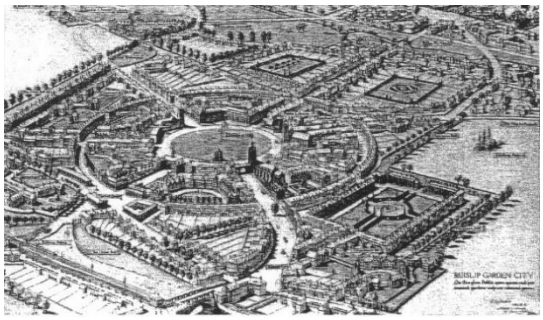
Tales of Atlantis could be seen as the inspiration for city states of the ancient world such as Athens, Sparta, Rome, Carthage, or Cairo. These cities had everything to be a self-sustaining state operating at a surplus sufficient for them to grow into a nation, all within the limits of the original city. It is never enough to simply survive, you must thrive.

In the 8th Century AD, Baghdad was designed as a center of learning and wisdom. The city was famous for its many libraries both public and private. The residents greatly benefited from its centralized design; cutting edge from the best minds of its time. Perhaps borrowing from Plato's Atlantis story about its rings.

About a 1,000 years later in 1898 the "Garden City" movement was started in 1898 by Sir Ebenezer Howard in the United Kingdom. Garden cities were intended to be planned, self-contained communities surrounded by "greenbelts", containing proportionate areas of residences, industry, and agriculture.

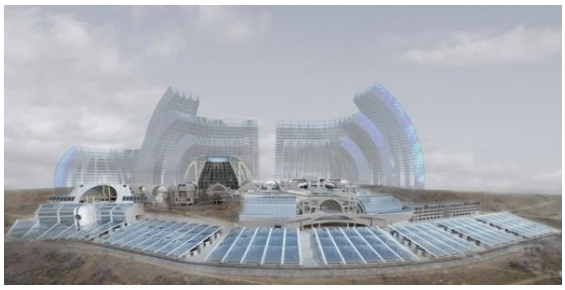
Sir Howard's idealized garden city would house 32,000 people on a site of 6,000 acres *(2,400 hectares),* on a concentric pattern with open spaces, public parks and six radial boulevards, 120 ft *(37 m)* wide, extending from the center. The garden city would be self-sufficient, and when it reached full population, another garden city would be developed nearby. Sir Howard envisaged a cluster of several garden cities as satellites of a central city of 250,000 people, linked by road and rail.





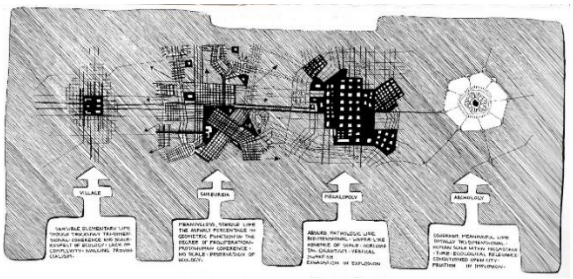
In 1956 Paolo Soleri started Arcosanti in Arizona to experiment with his new idea of Arcology. This new word came from combining the words Architecture and Ecology. Arcology, as envisioned by Soleri, would be a hyper-dense city, designed to maximize human interaction; it would maximize access to shared, cost-effective infrastructural services, conserve water and reduce sewage; minimize the use of energy, raw materials and land; reduce waste and

environmental pollution; and allow interaction with the surrounding natural environment. Arcosanti is a prototype of a desert Arcology.

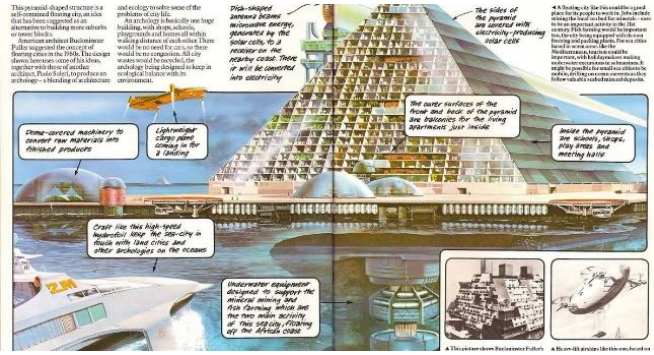


"Arcosanti 5000" designed for Arcosanti Paolo Soleri before his passing in 2013 was for a population of 5000 people. The illustration shows portions currently built with computer graphics of projected areas layered on top.

Below is series of illustrations trying to demonstrate the logic of an Arcology over other forms of civil organizations that are currently in use.



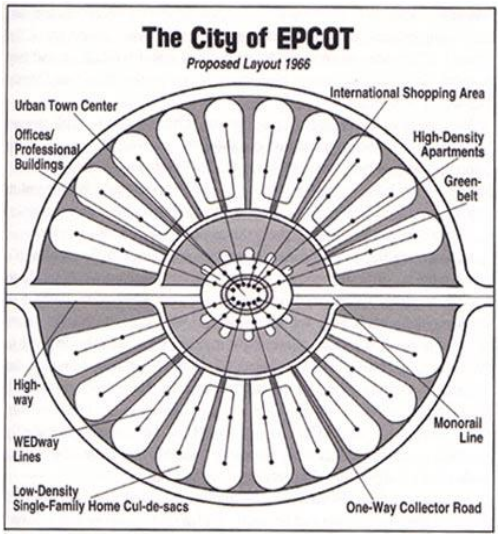
Architect and godfather of the Geodesic Dome, Buckminster Fuller started playing with the idea of floating cities in the 1960's. He borrowed from the ideas of Paolo Soleri for this floating pyramid meant to provide for 5000 people proposed in 1979 and envisioned for the year 2000.



The original design of the EPCOT (Experimental Prototype City Of Tomorrow) project as proposed by Walt Disney in 1966 has a lot of the characteristics of an Urbanate.

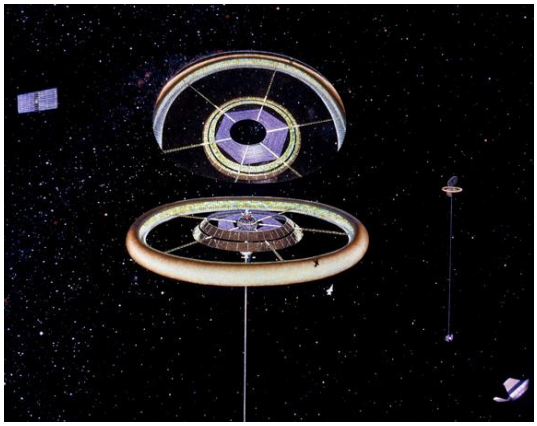
Review the original broadcast of this Wonderful World of Disney presentation in the link below.

https://www.youtube.com/watch?v=sLCHg9mUBag



These designs are different concepts of the Urbanate idea. Trying to make an efficient city that will minimize our travel time, optimize energy efficiency and provide a sustainable way of life. All the while, trying to maintain the highest standards of living for its residence and guest. My vision of an Urbanate reminds me of an idea by Architect Bjarke Ingels, "Hedonistic Sustainability". We do not have to accept a dystopian life of sacrifice to achieve sustainability in our cities of tomorrow. I hope to see the Urbanate the city of tomorrow become a reality as our cornerstone to building a better tomorrow.

Finally, you have NASA Space Settlement Design Study produced in 1975 taking this idea to the final frontier of space. The study yielded a torus design for 10,000 people using material largely resourced from the moon. This city in space was not only meant to be self-sustaining but self-replicating. The city was also designed to produce giant solar arrays and beam the energy produced back down to the earth in the form of microwave energy. This energy produced was also designed to pay for the station and future stations creating a profitable enterprise for the station.



Greed

By Ron Miller
Published in: Section 3 Newsletter, June 1984, No. 10

The human animal is a problem solver. All people hate to have problems so they act to solve them. People often create more problems for themselves in their attempt to solve a problem by incorrectly analyzing the problem, misinterpreting results of applying the problem solution (lack of correct feedback).

Human behavioral patterns that develop by making such mistakes are usually called 'neurotic'. Such patterns usually result from experiences early in life. This means that the behavioral patterns of many persons are based on evaluations of situations they were probably not old enough to properly understand. As they grow older, the initial situation is forgotten and the person responds automatically to a certain situation without regard to appropriateness.

In our present society probably few people are free of such behavioral patterns. In our present society with its rapid evolution, behavioral patterns quickly become obsolete due to the shifting environment.

When we refer to someone as behaving in a childish fashion, it is probably a neurotic pattern to which we are referring.

The human animal is too complex to say that a behavioral pattern such as greed can be caused by only one type of situation. The intense desire to acquire material goods endlessly with no thought to end use (greed) is a destructive, neurotic pattern.

Probably the most extreme example is the miser who starves to death with thousands of dollars stuffed in his mattress. Such behavior results from insecurity and in the end destroys its owner.

Greed is a typical neurotic pattern. In all such behavior several questions apply: (1) is the behavior producing the desired result? (2) Is it harmful to anyone? (3) Are you consciously aware of what you are doing? (4) Are you in control of what you are doing? If you are having trouble with these questions, you probably are running on auto-pilot.

Habit patterns are a necessary part of living. If we had to consciously consider every move we made, accomplishment of any task would become difficult. The question is: Does the habit pattern contribute to the intended objective or not? If it doesn't work, you're probably doing it wrong.

Technocracy offers a design for the operation of a high-energy civilization on the North American Continent. While no redesign of the human psyche is intended or planned, it should be obvious that a drastic change in the social environment is bound to affect human behavior.

Technocracy doesn't promise a utopia where all would be happy. Happiness is a quality developed within an individual that usually results when the individual behaves in harmony with his environment. The Price System is an inappropriate social system for our present level of technological development and as such is a neurotic behavioral pattern.

Some neurotic behavior is not terribly harmful, but it is never helpful. For instance, frustration with the immediate course of events in one's personal life is seldom solved by overeating, yet many do just that. Greed is a pattern that has a tendency to destroy not only the persons so afflicted but those around them also.

Technocrats are often asked what Technocracy proposes to do about greed. The answer is--nothing. There will not be anything blocking a person from drawing their own conclusions from a situation.

A BLOODLESS REVOLUTION

By George Wright

Technocracy, a future worth examining, is being hailed as a solution to an economic condition which now threatens to disrupt our economic civilization. These conditions are:

A revolt of the unemployed: An increased population of dispossessed homes; unemployment poised to double or triple; debts repudiated. This is a startling picture.

Figures indicate unless a vast change is made in the political and economic system of this country we may soon face a collapse of our present social structure, the downfall of currency, and utter chaos taking the place of orderly government.

What are the forces which might bring us to such a pass? Technocracy now points out why we are coming face to face with ruin unless steps are taken to avert the disasters which threatens not only America, but the planet we call home.

Bluntly speaking, Technocrats have declared that the development of machinery is increasing at such a rapid pace that fewer and fewer income producing humans will be needed in most of our productive capacities; that the few remaining workers can no longer afford to support the unemployed and under-employed and will rise up in revolt to take by force the necessities of life which they are no longer able to earn by their own efforts.

It is only a question of time when technological innovation, deportations of factories (off-loading) will have displaced so many workers that *an entirely new system of economic support will have to be implemented.*

THE DESIGN OF TECHNOCRACY

Technocracy proposes a scientific and bloodless "revolution," a substitute for the present system of employment that must be achieved. Since there are too many people for the jobs, obviously then jobs must be divided up among everyone capable of working. In order to accomplish such a proposal without turning to Fascism, Communism, or any other "isms" which so far have proven as unsatisfactory as the economic system under which we now suffer, a new foundation must be found.

That foundation can be had in ***"energy valuation."***

Everyone is capable of expending energy whether by brain work or manual labor. Under the present system we exchange this output in dollars and if no one requires our energy we do not receive dollars to spend for our living.

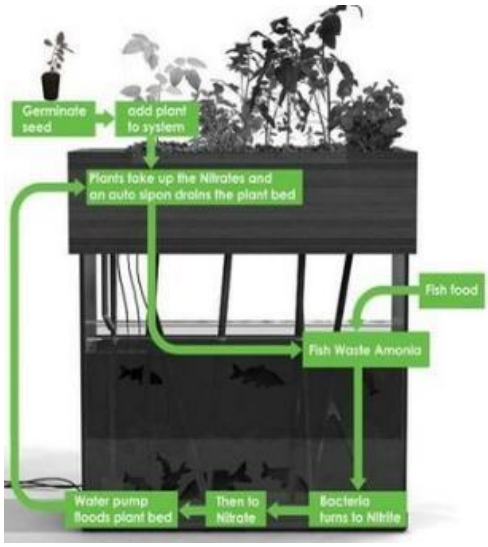
Instead then, of obtaining dollars, Technocracy proposes that energy be valued using criteria that considers the environment and other important sustainability factors and use that as a 'currency'. And all work be divided so that each person has to work fewer hours to obtain a living, and has an opportunity to expend energy that fits with their skill set, knowledge, and passions.

For more information on an energy based economy click:

What would life be like in an Energy based Economy

Aquaponics

By William Green



Aquaponics is the marriage of Aquaculture (farming fish) and hydroponics (growing plants in a soilless medium). While both of these systems are efficient they have some major drawbacks. By taking the best of each type of farming, aquaponics solves the problems associated of each.

Aquaculture is simply fish farming. By keeping fish in overstocked tanks we are able to efficiently produce a fish crop without the use of boats, nets or fishermen. Traditional fish farms have been known to be environmental disasters. Fish are kept in small tanks with their water continually recirculated. Their effluent quickly builds to toxic levels. To solve this up to 15% of the water is cycled out daily, often into streams and ponds, causing toxic shock to the environments. Aquaponics addresses this waste issue and turns it into an advantage.

Hydroponic systems use large quantities of water and manmade chemicals to feed plants in a soilless grow media such as gravel, lava rock, or expanded clay. If kept in a greenhouse they can produce food year-round. They are extremely energy efficient and relatively simple to care for. The largest drawback is that they rely on chemical fertilizers and require constant monitoring to maintain nutrient levels. Aquaponics removes the need for external fertilizers.

Aquaponics does this all cleanly and simply through the use of the nitrogen cycle. This simple system comprises of a fish tank, a water pump, a grow bed and some plumbing. The fish happily spend their days swimming in a circulated tank of water. As they are fed and excrete, the water is pumped from the tank.

This water is periodically flooded and drained through the grow bed. Then the magic happens. As the system matures bacteria start to colonize the grow media.

These bacteria take the ammonia from the fish waste and converts it into nitrites. These nitrites are not food for our plants yet. Next, a different bacterium converts these nitrites into nitrates; which are readily absorbed into the plants, providing food. As the grow bed floods the plant's roots are temporarily submerged, providing them water and nutrients. As the bed drains the roots are provided air so as not to rot. Once the water has been cleaned by the bacteria and plants it drains back into the fish tank. The water is cleaned and the fish are happy.

By combining these two systems we help to close the ecological loop of both systems. The fish waste that was a problem becomes food for our plants. Our plants that used to require fertilizer input now are fed from the waste from our fish. The only major input into this system is fish food. Water is conserved and there is no waste released into the environment. A small aquaponics system can provide both a fish crop and a plant crop. Many other problems are also solved such as no weeding needed, no bugs or pest to disturb your crop, grow beds are typically raised as to be easier to harvest and plant, and you will never forget to water your plants again!

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