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Indoor Community Garden

OVERVIEW

Obtaining fresh organic food can be difficult for financially challenged families across America. While there are many sources for fresh vegetables, greens, herbs and fruits, they can often be cost-prohibitive for families on WIC or other government subsidies. This is a proposal to create “Indoor Community Gardens” (ICG) across our nation, converting unused buildings or spaces such as an abandoned high school gymnasium, into highly efficient indoor hydroponic gardens. Our system uses local suppliers and contractors to do the build-out, boosting the local economy. The farms will be staffed by local volunteers and will also provide jobs for hard-to-employ people of all ages, gender preferences, LGBTQ, country of origin, with almost any physical or language hindrances. The farm will also employ those with handicapping conditions such as PTSD, Autism, AD&D, ADHD, Downs or simply those too old or frail to work in a high-stress environment. Many of these individuals cannot work in public settings due to the unpredictability of noises, interactions, etc.

The ICG brings diverse parties together in a shared cause: feeding the hungry.

By working together with a wide range of people of all ages, genders and lifestyles in the ICG, volunteers and paid workers alike enjoy camaraderie, friendship, and a stable and welcoming workplace, all in a peaceful calming nature-enforcing setting. Their mental stress is reduced and their self-worth and sense of belonging and contributing to society soars. The net health and wellness effects can easily be documented over time by their therapists or doctors. **You WILL see lives changed for the better.**

Of great importance is that we will provide good-paying jobs to people who often cannot find paying work at all. We will also be creating **“urban agriculture entrepreneurs”** – people who see a business opportunity and will apply their growing skills to making money. This is a real thing, happening all across America. And there is a ton of grant money available to make it happen.

Of even greater importance is that will be giving a new life to a wide swatch of society that hasn’t had a lot of breaks lately. Through their shared experience of hurt, they will truly come together in a shared endeavor – a true **“farm co-op”** in which all team members have a voice and a platform to express themselves. Because this is a true year-round team effort, it will succeed where so many “window dressing” social programs have failed in the past.

That is because, rather than **PATRONIZING** the displaced members of society, we will **EMBRACE** them. We will give a group of every day,

ordinary citizens a voice in the community. It will give them **a place to be** that is fun, safe, personally rewarding and comforting. In return, they will find a sense of belonging, of being wanted, and of providing a valuable service to their community.

The premise of being part of such an organization will be of great appeal to many.

FOR SOME... It's a place to grow food to feed the less fortunate of the world (and take some home, as well.) These individuals will be the life-long non-profit supporters, the do-gooders who just can't sit at home and watch others suffer. We love these people who, whether rich or poor, black or white. They just want to be out helping.

FOR SOME... They haven't worked in years, or possibly... ever. They have handicaps or impediments that just don't make them employable. Now they can earn real money and not be limited by their handicaps.

FOR SOME... They've withdrawn from society, some for months, some for years, some for decades. Nobody seems to want them. They're scared to go out. They miss talking with people. They see this as exciting, a chance to make new friends and cut things up a bit. And the income wouldn't hurt. Nor would the unlimited access to fresh food in abundance, which they might need.

FOR SOME... It's a leadership opportunity. They're natural entrepreneurs and business geniuses who haven't found their niche yet. They will jump at the chance to head up a money-making project (and

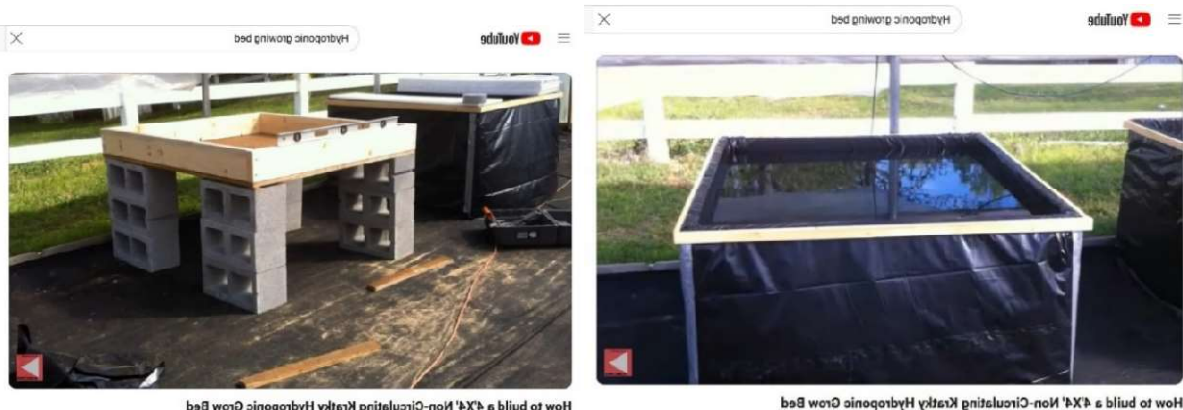
get a very nice starting salary as well, likely in the \$10 to \$15 per hour range.)

FOR SOME... It's community service. They must serve time helping others, and it's fairly certain that the senior members of the ICG staff would have a few words of guidance for those struggling with their role in society.

TECHNICAL DETAILS

The key advantage of our ICG system is that we have greatly simplified the food-growing process so no technical skills are required. Our system has been greatly "dumbed down" to make it easy for ordinary people with little to no farming experience to grow food successfully on an ongoing basis; no "green thumb" required.

We build simple growing tables out of supplies that can be bought at any Lowes' or Home Depot store. The only 'imported' items are the LED lights, which we have researched for 8 years.





The growing table is made with a full 4' x 8' sheet of $\frac{3}{4}$ " plywood with 2" x 10" sideboards. (4' x 4' for the wheelchair-accessible beds.) The box is put up on cinder blocks and lined with a heavy plastic liner. All-natural nutrients are added to the water to feed the plants as they grow.

A sheet of plexiglass receives 40 holes 3" in diameter. Plastic mesh cups are filled with coconut coir (shredded coconut husk) and seedlings are placed in the cups, which are placed in the holes in the plexiglass cover.

High-output Agricultural LED lights are hung from the ceiling on an automated remote-control pulley system. This allows workers to raise or lower the lights as needed. The lights themselves are specifically engineered to provide the exact same full-range bandwidth as the sun. As the seedlings grow, they drink the nutrients. When the nutrients are depleted to the half-way point, the plants get all of their nutrition from the water, and they get all of their oxygen from the open area in the tank. The only day-to-day job that the workers will have to do is to replenish the nutrients to the half-way mark, which provides the ideal growing condition for the plants.

All the nutrients used in our growing system are non-toxic and safe to work around. The use of all-natural minerals has been approved by the USDA and the food grown using this method is legally defined as "organic."

As you can see, this is a high efficiency growing system that is very low in cost, it is easily built by local crafts people in a week or two. ICG workers can start the plant seedlings well ahead of the construction date, so the plants can be started immediately. Based on the crop, the first harvest will be only 6 or 7 weeks later. From that point on, greens can be re-harvested every 2 to 3 weeks.

OUR RATIONALE

People LOVE gardening, especially seniors. But in a traditional Community Garden, the work is hot, sweaty and very tiring. In our experience of running a 2,000 square foot OUTDOOR community garden in 2018 & 2019, we found that volunteers are “gung ho” in March and April, but when the first 100 degree day hits in June, they abandon the project due to the heat. Our INDOOR program removes the hard work and challenging environment. Instead of sweating in the hot sun on your knees, food is grown indoors in an air-conditioned environment. Plus, the food is grown in raised beds at chest level, meaning that even people in a wheelchair or a rolling chair can farm under our system. Also, there is no heavy lifting or hard work, so everyone can work and successfully produce large quantities of healthy, delicious organic food.

WHY INDOOR INSTEAD OF OUTDOOR?

Here in Tennessee, our growing season is generally May through October, one-half of the year. With our ICG program, we can grow 12 months out of the year, with a predictable and reliable schedule of food output by quantity and date. People can rely on the crops grown in the ICG because we will have the metrics to prove it.

If the location has a secure outdoor space to work with, we can grow crops conventionally as well. I say “secure” because we have seen consistent complaints from the people who actually WORK an outdoor community garden about food theft. The day before harvest, much of the crop seems to magically “disappear” from the garden. The neighbors LOVE fresh vegetables; they just don’t want to have to work to enjoy them.

In addition, WHT has experience in building trellis structures which are ideal for green beans / pole beans, as well as climbing plants like cucumbers, squash, etc.

We also have previously installed a 330-gallon drip irrigation system to water outdoor crops automatically. That alone significantly improves the reliability of the outdoor garden, because we’re not relying on volunteers to show up (which they often don’t, causing the plants to reduce yield.)

EMPLOYMENT BENEFITS OF THE ICG

In one relatively small space such as a decommissioned high school

gymnasium, we can provide jobs for up to 30 people. In that space, we can literally grow 2,000 heads of greens, or any combination of high-value organic food crops such as lettuce, kale, Swiss Chard, as well as a wide range of high-value herbs such as fresh basil, rosemary, cilantro, parsley, dill and others. The crops replenish themselves every 3 to 4 weeks and can be harvested again. Cashflow in the ICG can be up to \$10,000 per month. We can set them up to accept WIC (food stamps) so the entire community can afford to purchase the food.

So the money from the purchase of the crops can actually be returned to the individuals who participated in growing the food. It boosts the financial well-being of the entire community, as many of the workers will be those who are currently living on government subsidies. The program will return many people to the workforce that have not succeeded in finding employment elsewhere. They have plenty of time on their hands, and they will be eager to earn a decent wage (likely to be \$10 - \$15 per hour) doing very light work.

LEGAL STRUCTURE OF THE ICG

We propose that local communities establish their farm under a new or existing non-profit structure, a 501(c)(3) organization. Then, the farm can be established as a co-op under that non-profit. This means that the business is set up as a self-standing business owned and operated by the volunteers who work there. It will be set up under a Trust, so each owner has a clearly defined financial interest in the farm but is protected from liability. The extent of any participant's liability will be the value of the build-out and the value of the crops. Insurance will be

necessary due to the diverse work staff, but a good legal firm should easily be able to structure it for the safety of all participants and investors / supporters.

PROGRAM GUIDELINES FOR THE LEBANON ICG

It is important to note that our non-profit – World Hunger Team – will develop all the program materials including training videos, how-to guides, manuals, etc. These modular materials will be linked to a web portal specifically created for the ICG program. It means that everyone involved with the local ICG will be interconnected as far as sharing knowledge and advice. Some areas of the website will be restricted to the local ICG management, who will post meeting notes, comments and concerns for improvements / revisions to the program. Also, all permits and legal documents will be available here under secure protection. The site will be cloud-based and will require little to no maintenance by local ICG participants.

PROGRAM RISKS / CHALLENGES

Any time a new program is established, it is subject to local conditions that may or may NOT be under the guidance and direction of the program implementers. For example, if the garden installation goes into the basement of the commissary, we don't know the physical limitations of the building. There are minimum standards that must be met i.e. acceptable electrical wattage, functioning HVAC, access to water, is the space ADA compliant, etc.

The local building inspector and project manager will be required to approve the space before any work starts so the potential physical

liabilities are minimized. Whenever you employ people with disabilities, their needs must be met according to Federal law. So that may require additional supervision based on the degree of limitations of the work force.

When dealing with large volumes of water needed in the hydroponics growing process, there is always the chance of leakage. We have largely minimized these risks by using tested and proven plans. But that is always a concern. Insurance will be required on the space, and the cost of that insurance may skyrocket when disabled individuals are working at the site.

It is also important to note that there is immense Federal pressure to find employment for those who are typically hard-to-employ, at least in decent paying jobs. These include those suffering from PTSD, ADD, Autism, Downs – as well as senior citizens who want to work but are subject to slipping and falling. All of these add liability to the job site. But the government desperately wants to create jobs in this sector, so additional funding may be available from other government resources to cover the additional costs of basically "child proofing" the work site. It's a subject that needs to be addressed closely before proceeding.

ORGANIZATION DETAILS

At World Hunger Team, our mission is to enhance the health and well-being of impoverished communities by providing access to organic and sustainable nutrition and clean drinking water. We achieve this by pioneering innovative systems that make food cultivation possible in areas where little to no food is currently grown, bringing self-sufficiency and hope to those in need.

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