Herbal Coin

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Abstract

In this paper we introduce three programs that provide a new way for people to access proper health foods in households, schools, and grocery markets.

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Introduction

The idea of healthy food has been known for centuries. Over the last hundred years society has introduced proven unhealthy alternatives that have greatly solidified a line between healthy and unhealthy food. Whether in the grocery market or even in your refrigerator that line has been drawn. Based on historical data, it seems society has forced us to begin on the unhealthy side and slowly incorporate the healthy side throughout our lifetime. With this current trend, bouncing to the healthier side completely is an uphill battle that tanks one's confidence.

From a health food diet standpoint, there are a lot of brands and services out there that you need to pay for. A lot of them lure you in based on the results that you see from the people advertised. But as we know everybody is different so, every product or service won't work for everyone, which can lead to wasted effort. These drawbacks disrupt a dieter's motivation to stay consistent to see their expected results.

From a distributor/manufacture perspective, it's all about what can turn a profit to keep the supply chain functioning. When produce is received, the inspection primarily consists of where it came from, smell and appearance. These identifiers are what's most important to buyers in the food market (restaurants, grocery chains, etc.). There is no consideration to how many nutrients the produce/plant has by the time it reaches a customer's kitchen table.

From a grower/farmer perspective, becoming a source for a distributor signifies the success of a farm in most cases. If so, a farmer tends to adhere to the requirements of the distributor which advertently controls a farmer's growing process.

From these different perspectives, we have safely assumed that there is little to no adherence to the food being produced in terms of quality, and high standards. At every stage it's either hard or time consuming to follow the known recommended practices of growing, distributing, and buying healthy food.

Our solution is to incorporate an incentive program at all three levels of the food chain by offering a crypto currency called Herbal Coin™, to those that adhere to a verified set of KPIs.

Herbal Coin Cryptocurrency

Herbal Coin™ is a blockchain currency that incentivizes users of the community with Herbal Tokens when they contribute and complete activities within each program. Herbal Coin™ is built on top of the Ethereum Blockchain primarily to be used as a utility token. At our core, we apply a strong focus on supply chain innovation while integrating with the lifecycle process of produce/herb growing methodologies. Herbal Coin™ Tokens will be the only form of currency accepted within each program offered, mainly to increase token adoption and maintain supply chain data tracking.

Indoor Garden Machine

Growing food at home is a beneficial hobby in many households. It inadvertently shortens the farm-to-table process by eliminating pesticides, herbicides, distributor processing and your normal trip to the fresh market. However, for those that solely rely on the traditional farm-to-table process, it would be very hard to convince them to switch to the more beneficial way of acquiring food. In retrospect, this struggle is likely rooted from limited physical space, time commitment, or just lack of interest.

How It Works

Our goal is to address these limitations with our first program by introducing an indoor garden machine that allows people to earn crypto growing produce/herbs. The indoor garden is designed to track the growth success stages of produce and edible plants. The growth success is determined by a set of KPIs:

- **Light**
- **Water**
- **Vitamin Count**
- **Mineral Count**
- **Glyphosate Count**
- **Time of Growth**
- **Soil Microorganism Count**

These KPIs will be tracked at each Growth stage:

fertilization → gemmule → seed → germination → seeding → growth → flowering → fruit → aging

These stages will be tracked by a mobile app that will be linked to the machine. Members can ship seed pods at any stage after germination. Once we receive any seed pod from our members and inspect the growth KPI's of each pod, the app will release the appropriate Herbal Tokens to their digital wallet. On the front end, the mission is to shorten the farm to table gap for those that struggle sticking to a healthy diet. On the backend, we are using the community to source healthy produce for various products that will be offered in major food markets that people will purchase with crypto they just earned.

Tech Specs

Plastic Frame	The machine will be constructed with Injection molded plastic parts. Carefully designed to house the internal hardware components
Rechargeable	The machine will have a polymer lithium-Ion battery that can be recharged via USB-C
Portable	Device can be folded and carried with ease
8 Seed Holders	The machine will have a total of eight seed holders for replaceable seed pods
LCD Screen	The screen will display a series of statistics involving all KPI's defined above for each seed holder.
8 LED lights	There will be an LED light pointing to each seed pod automated to turn on or off at the designated times of the day.
Self-Watering System	There will be a refillable water bay at the base of the device with a pump system to water seed pods in the holder and through spray holes in between the LED lights
Nutrient Sensor	A sensor will be inside the seed holder used to gather data on the predefined KPIs. The sensor can be tuned based on the pod that is installed by using the LCD screen
Wireless/Bluetooth	The Machine will have wireless capabilities to connect to the home network to send data to a member's account on the mobile app.

Growth KPIs

For every produce/herb that grows, there aren't any nutrition facts labeled when they're put in the grocery store. Having this information could be very beneficial when people buy or grow food.

The KPIs we chose are fundamental for the proper growth of any Produce/herb. Based on what type of seed pod is growing in the pod holder, it will determine what percentage of each KPI will be monitored via the sensor. Essentially, we will have a KPI formula programmed in all the sensors that can be adjusted based on the seed pod installed. All KPI data will be reflected in the mobile app saved in each user's account.

Light	The light that will come From the LED will be measured in **Lumens (lm)**
Water	Soil moisture will be measured in **kilo-pascals (kPa)**
[1]Vitamin	Vitamins will be measured with Biosensors technology
[2]Minerals	Minerals will be measured with **Spectroscopy**
Glyphosate	Glyphosate is a dangerous chemical that will be measured with **Spectrophotometric Technology**
[3]Time of Growth	An IR sensor will be used to calculate the height of a plant.
[4]Microorganism	Microbial biomass can be estimated by measuring the amount of carbon, nitrogen, phosphorus, or sulfur that is present in the soil.

Token Generation

KPI formula data that gets sent back to the mobile app determines how much Herbal Coin™ Tokens a member generates. If a member grows the same plant in each pod holder the KPI formula data will vary for each plant, thus which will affect the number of Tokens earned.

The life cycle process of the token is as follows:

1. **Member buys seed pods of choice**
2. **Seed pod is tracked and monitored in Indoor Garden Machine**
3. **KPI Data is sent to mobile app to calculate the number of Herbal Tokens earned**
4. **Seed pod is harvested and shipped to Distribution Center**
5. **Once Received, calculated tokens are released to members digital wallet within the app**
6. **Members can transfer tokens to another wallet or use the tokens toward future purchases of seed pods within our marketplace.**

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[1]https://www.lifeasible.com/custom-solutions/plant/analytical-services/plant-biochemical-analysis/plant-vitamin-analysis/

[2] Srivastava, Anoop. (2016). Re: Soil nutrient sensors?. Retrieved from: https://www.researchgate.net/post/soil_nutrient_sensors/56ac96647eddd3a1c28b4585/citation/download.

[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3231316/

[4] http://www.soilhealth.com/soil-health/organisms/measuring/#:~:text=Question%201.-,How%20can%20the%20number%20of%20microorganisms%20in%20a%20soil%20be,the%20microorganisms%20in%20the%20soil.

Note: Seed pods are an optional choice to kickstart the process with minimal setup. However, the Machine can support any soil a member chooses with consent that a member may have lower token calculations due to unmanaged plant environment.

Herbal way Agriculture

Years of research has taken place to understand the playing field that farmers undergo. What we have learned is that there is an inconsistency in the opportunity to make a living in this industry. There are big conglomerates who segment the market and force you as a farmer to do business with them knowing they are the middleman between you and your direct customers. To all the Local produce farmers, Community Supported Agriculture (CSA), Underrepresented distributors, local health food stores and health-conscious consumers. We are here to offer a better solution that will level the playing field and give opportunity to new or established farmers.

How It Works

Introducing Herbal Way Agriculture, a new way to generate value for your farm. Each seed that you plant on your farm that is edible can represent itself as an individual product to be sold. No other unit of measurement is used to determine the value of what a farm produces. To do this we will supply your farm with an equal number of sensors to seeds that you plant. Each seeds' sensor will track the growth stages including various other factors that constitute a healthy plant. Including:

- **Light**
- **Water**
- **Vitamin Count**
- **Mineral Count**
- **Glyphosate Count**
- **Time of growth**
- **Microorganism Count**

All of this data will be reported back wirelessly to a central hub that can be reviewed electronically on a computer or mobile device. A farmer will have the ability to see how a farm is performing over time. The data can be reviewed plant by plant or as a whole with metrics of how your farm is doing.

The Financial Freedom

As a farm produces data on how its plants are growing and thriving, farmers will have substantial validation that their practices produce great farming results. The data can also uncover bad farming practices based on the recommended factors that constitute a healthy plant.

The purpose of this system is to accomplish two things. The first is to reward great farmers for continued farming best practices by implementing a new token-based system backed by blockchain technology.

How it works

Herbal Way Agriculture will implement a Cryptocurrency Called Herbal Coin™.

Token: A Herbal Coin Token

Every sensor will calculate a set number of **Tokens** a seed will gain based on a predefined formula that will include:

- **Vitamin Count**
- **Mineral Count**
- **Glyphosate Count**
- **Time of growth**
- **Soil Microorganism Count**

These KPIs will be tracked at each Growth stage:

fertilization → gemmule → seed → germination → seeding → growth → flowering → fruit → aging

Via the Central Hub farmers will be able to see how many tokens their farm has generated as a whole or by the individual plant.

These **Tokens** provide a level of value to the farm to attract food distributors and wholesale buyers to purchase the farmers supply with said **Tokens**. The **Tokens** generated within the Central Hub represent a price tag on each plant to designate an accurate token cost, giving farmers the ability to earn said **Tokens** on their supply.

Maintaining Ethical Practices

The formula that will be used to identify a healthy plant gives farmers the insight on which parts of their farm need more resources than others. Also, it will provide transparency to buyers on the health trend of farms over time. For farmers to keep the continued interest of buyers over time, this system will force the need to maintain ethical farming practices because the data is being tracked for transparency.

The Core Value

Bringing value back to the farm is simply letting the farm sell itself. The goal is to give farmers a hands-off approach to competitiveness in a congested marketplace. Letting crypto become the primary form of payment greatly mitigates a buyer's need to discriminate and have a biased or monopolized approach on who to buy from.

In theory, this process will bring independent farmers to the forefront and transform the marketplace to be fair to the best farm and not by the farmer/company.

Herbal Way Community

Introduction

When people begin to diagnose themselves there is a false doctrine that's been taught about our bodies that some may agree or disagree with. In contrast, there are reputable organizations that dedicate their time and resources to contribute to this doctrine with mixed accurate and speculative research. One would assume that this confuses the masses on how to properly take care of themselves and give too much power to groups that dictate all the information we see. I, on the other hand, have an educated assumption that we get lost in what could happen based on predictable circumstances vs. what we know can happen based on actual events.

Based on circumstance, there is a chance that one would ask themselves the question on whether their health choices are just and accurate. These moments could stem from a loved one passing, unexpected Chronic illness, or just everyday annoying symptoms (i.e., always cold, coughing, dehydrated, always tired, can't sleep, etc.). From a chronological perspective, most health concerns start with tolerable symptoms that lead to long term discomfort. The question that needs to be asked is how we get ahead of all the symptoms.

Sending the right message is a challenge when trying to influence the decision of others. When it comes to health-related decisions. I believe there is a mountain of information that needs to be discerned for accuracy and credibility. However, there are inaccurate and unreliable sources that can be interpreted as legible due to many factors (i.e., the author, publisher, date, etc.). Performing this level of research could become an equivalent of a full-time job.

A solution to this problem will entail an all-inclusive training system that consolidates all the complicated mountain of information down to a consumable level. Ideally, the training system will portray the message of "back to the basics of personal health". A fundamental understanding that will change the way you diagnose bodily symptoms which will go a long way in preventative health. Upon the completion of specific training courses, there will be suggested natural remedies that will complement the need for relief of the prolonged symptom.

This training system will provide different levels of knowledge. The first level will include fundamentals of health from a bodily symptom perspective. The second will be catered to chronic illness training with fundamental causes and suggested natural cures. The third provides advanced knowledge of environmental factors and different scientific research that complements and contradicts natural and holistic practices.

The Platform

To centralize alternative health resources, Herbal Way has created an online platform that teaches self-care principles through extensive courses and one-on-one consultations. With continued participation, Herbal Ways' goal is to create a connected community of likeminded individuals that seek knowledge surrounding alternative healing.

This online community will give my target audience a place to interact with likeminded individuals and give health product owners the exposure they need. I will provide a monthly subscription model for regular users to take courses, vendors to sell their products, and instructors to create courses.

We will integrate **HerbalCoin™** Tokens into the platform to incentivize users when they complete courses and buy products. By incentivizing each user, they will earn a subset worth of crypto tokens that can be redeemed for various products and services in our community platform.