



In the 20th century, industrialization has led to large, complex infrastructures in agriculture, power, utilities, and transportation. These centralized systems have made the necessities of life much more convenient.

However, these advances and consolidations have led to a series of catastrophic problems in the 21st century:

- The growing demand to increase yields and reduce cost has robbed our food of most of its nutritional value
- The need to transport food over long distances requires food to be harvested before it is ripe
- The overuse of chemical fertilizers and pesticides depletes the soil and harms the environment
- Global supply chains can be disrupted or destroyed by events like COVID, labor strikes and geo-political conflicts
- The power grid can be disrupted by severe weather, excess demand and poor management.
- Drought and lack of fresh water can cause famine and health problems

In short, the over-reliance on large, centralized networks has made us vulnerable to serious problems, which can ultimately paralyze our society.

However, from great problems comes truly innovative solutions!

For the first time in history, these problems have been SOLVED in one elegant, unique platform that produces fresh, organic produce close to urban areas that most need it. These systems:

- Produce tons of fresh, healthy fruit and vegetables in a fraction of the land area
- Minimize travel time and distance for fresh food
- Produce a surplus of power that can feed power to the grid, rather than pull from it (or remain completely standalone)
- Produce fresh drinking water every day

Sound too good to be true?

INTRODUCING:

Terra Firma Foods is a unique distribution platform designed to “disrupt” the organic food environment. What we want to accomplish is the creation of a confident model for related parties; customers, suppliers, and Capital Investors, and in return, provide them access to the tools necessary to complete their investment endeavors.

The five key elements are a 1. Truly-100% organic food 2. Within hours to shelves with our customers, JIT “Just in Time Freshness” 3. Reduce spoilage and 4. Deliver continuous returns to our investors 5. Self-Energized.

SUPERGRO™ Process with SuperGro Containers, SuperGro NexGen Farming™: SuperGro Process™ will satisfy Large Grocery Retailers, Restaurant Chains, and the Consumer.

THE SOLUTION: ONLY TERRA FIRMA FOODS PROVIDES YEAR-ROUND, TRULY ORGANIC PRODUCE 30-60 MINUTES FROM CUSTOMER.

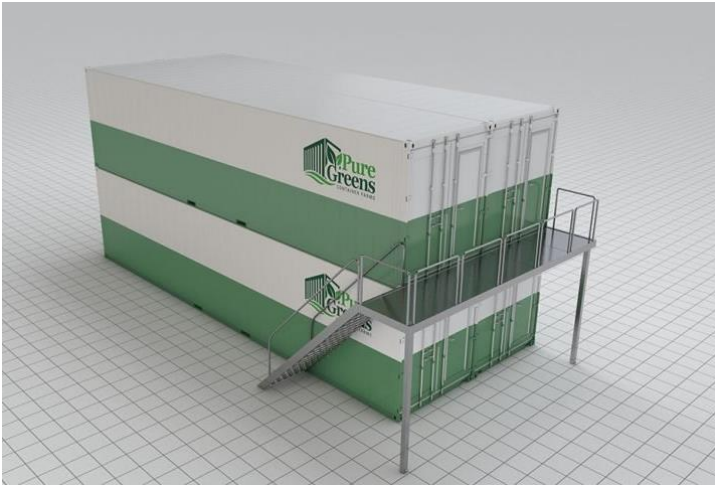
- Truly Organic, No Pesticides, No Bugs
- Contained Environment
- In soil, Terraaponics
- Soil sustainable up to 5 years
- Clean amendments
- Terra Firma Foods mobility, the SuperGRO Containers and NexGen Farm “ANYWHERE ANYTIME” is to serve customers within a 30–60-minute radius providing freshness to the customer, no waste, increase profits.
- 500 square feet – 100,000 square feet
- SuperGRO Containers 45’L x 8’W x 9’H

Terra Firma Foods NexGen Farms and SuperGro Containers; Why?

We believe food should not only provide sufficient nutrition to be healthy and should help us to thrive and taste great! Terra Firma Foods has developed a “back to the future” approach in growing produce, using advanced controlled environment technologies and methods while maintaining the use of natural, nutrient rich soil.

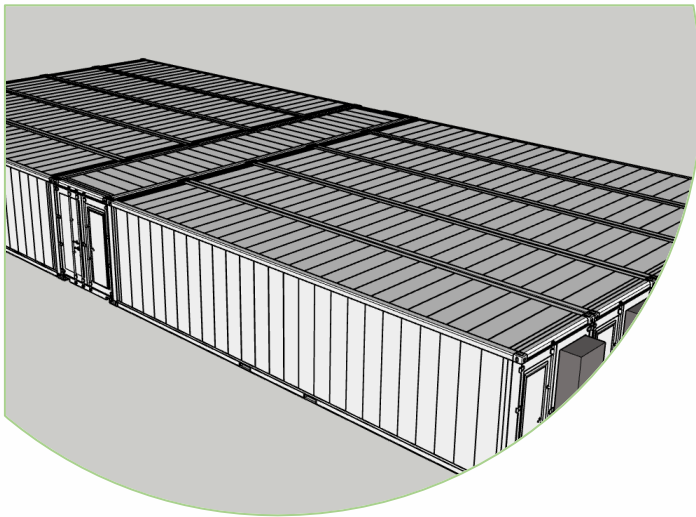
Unfortunately, through "advances" in mass agriculture and global distribution, much of the food we eat today has been compromised by NOT being grown in nutrient rich soil, being harvested before maturity, then being processed, and packaged for long shipment to customers. All of this helps us feed the world, yet detracts from having locally grown, fresh tasting, nutritious produce the likes of which you experienced in your youth and was enjoyed by earlier generations.

The Terra Firma Foods NexGen Farms and SuperGro Container is the ONLY controlled environment solution which grows produce in natural, nutrient rich SOIL that our grandparents enjoyed and is guaranteed to be truly organic.



**Terra Firma Foods SuperGro
Container: DOUBLE STACK**

- **120 Trays per Container**
- **Approximately 35k plants**
 - **Depending on plant**
- **Self- Energized**
- **Remote Sanitation**
- **45’Lx8’Wx9’H**



**SuperGro Process Abundance
DOUBLE STACK**

- 6400 square feet of growing area
- Potential 230,000 plants | depends on desired plants
 - 832,000 micro green plants

**Terra Firma Foods
Utilizing Terraponics™**

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LEAFY GREENS - 14 MAJOR

Romain Lettuce
Spinach
Spring Mix

HERBS

Arugula
Basil

**MICRO GREENS –
40 VARITIES**

Broccoli
Red Mammoth Cabbage
Red Russian Kale

FLOWERING PRODUCE

Tomatoes/Cherry Tomatoes
Strawberries

ENERGY

Terra Firma Foods, Inc. provides two Self Energized solutions. Energy is a problem for all especially for Vertical Farms, water consumption.

PROBLEM

- Renewable energy solutions still rely on electrical grid or batteries
- They do not manage electricity output consistently
- Most renewable options require large footprints of land

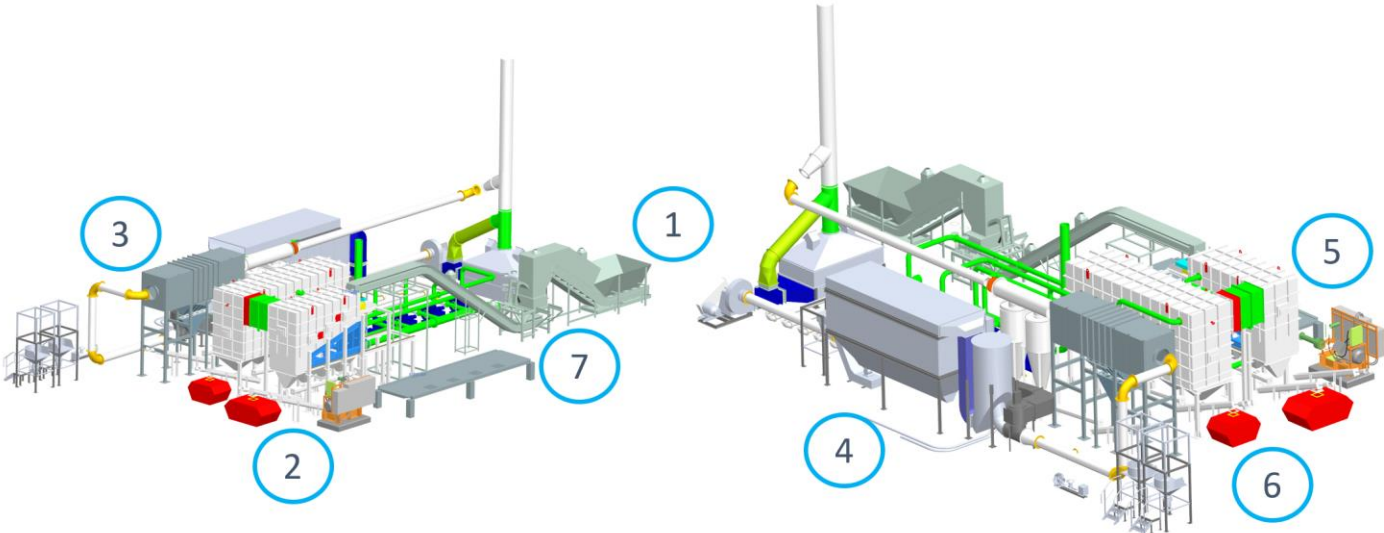
ALTERNATIVE SOLUTIONS

- Solar
 - This means, that, for a 1mW solar PV power plant, the area required is about **2.5 acres** or 100,000 square feet.
 - 10 MW solar farm is the desired size for this project. A solar farm of this size utilizing amorphous silicon modules will require approximately **150 acres** of land at the site.
 - The announcement was made at a ribbon-cutting event held at the **380-acre** photovoltaic solar farm. The 30-MW solar project comprises more than 127,000 photovoltaic solar modules mounted on single-axis trackers that follow the sun to maximize solar-energy production.
 - Unstable with no sunlight, power output degrades in off peak times and defaults to the grid.
- Hydro
 - Water is drying up
- Wind
 - Land availability, approximately, ten- year lifespan wind is not consistent

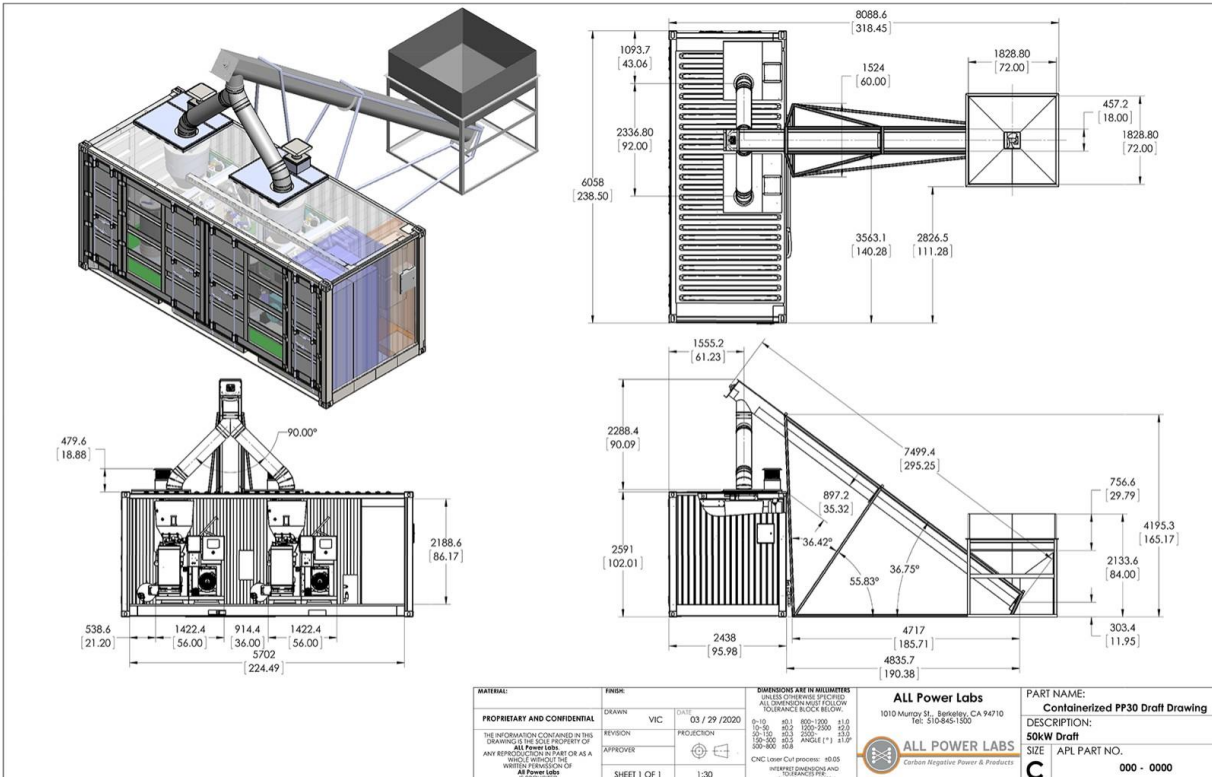
TFF SOLUTION

- CTEC Energy – gasification thermal process utilizes a slow controlled heat process without ignition with no emissions.
- Can handle 18 tons of waste per day, aiding municipalities in waste management.
 - Plastics, Garbage, Wood, Cut up tires
- 20-year life span
- 30' x 100' footprint
- 18-36-month payback
- 100% waste to 100% clean energy with minimal emissions or no emissions.
- **OUTPUT**
 - **2,800,000 kwh of electricity annually** - 350 kwh per hour x 24 hours x 340 days; (2,856 Mwh; 2.856 Gwh)
 - **20,000,000 of thermal energy annually.** If thermal is converted to electricity at x .333 minimum it equals 6.66 Gwh; (6660 Mwh; 6,660,000 kwh)
 - These conversion scenarios are theoretical per plant calculations.
 - The total annual electricity when adding the excess electricity to the minimal conversion of thermal is 9,400,000 kwh per plant, usable or sellable. N.B. this is in addition to the energy that is produced to operate the plant.

IMPLEMENTATION COSTS



CTEC Plant



POWER PLANT PP30 COGEN-CS

