

# 2021 Torpedopot<sup>™</sup> Vs Hydroponics

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# Introduction



Torpedopot<sup>™</sup> has established itself as the worlds first fully automated, self-growing, vertical gardening system. Our goals are to provide you with the most affordable and reliable modular growing systems in the world. Torpedopot's intuitive inline watering design allows plants to grow faster, yield more density per square foot than any

traditional or hydroponic gardening system available on the market. Setup time is less than an hour and even less time is needed throughout the season to manage your vertical garden. Once the system is set up, the self-growing, vertical gardening system can be automated using a timer or our Data Acquisition Test and Control Station. Torpedopot's patented vertical growing technique allows gardeners and large-scale farmers to increase their yields by more than 1,000% when compared against traditional farming techniques and hydroponic growing methods. Your role in setting up your self-growing planter is to add soil,

seeds or seedlings, turn on the planter, select feeding schedules, and enjoy the



1,000 Cherry Tomatoes

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wth for the rest of the season. You can now grow thousands of fruits, vegetables, herbs, nuts, and grains without having to touch the ground. Torpedopot<sup>™</sup> can grow 3.5 million plants inside of 1.33 acres of land. Immediate Benefits:

- Vertical Growing: Grows more vertically than traditional farming or hydroponics.
- Fully Automated: System is fully automated.
- Mobile: Mobile growing system that can be adapted to small and large farms
- Capital investments: No tools are required, and setup is is less than 20 min.
- · Growth: Plants grow fuller and reach maturity quicker
- Organic: Grow crops organically using your mix of fertilizers
- Pest: Blocks entry from rodents and other pests.
- · Germination: Germinates seeds and manages plants throughout their full lifecycle
- Resources: Uses less space, water, fertilizers, fungicides, pesticides, herbicides and more
- Weeding: Virtually no weeding
- Soil: Soil does not need replacing

For those in agribusiness our planters can be manufactured to include built-in sensors that operate without any human intervention. With a variety of alarm notification options and reports, the system is fully configurable to meet your needs. These integrated sensors can easily measure barometric air pressure, humidity, moisture, soil and air temperature, pH,and water and nutrient flow, dissolved solids, and more. You can choose from a wide selection of temperature data loggers, transmitters and probes that will integrate into you production environment. Data is logged continuously and autonomously at the point of measurement ensuring that temperature, humidity and other historical data are never lost to power or network downtime.

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### **Immediate Benefits**

#### **Economics**

Hydroponics is an expensive technology that's predicated on someone opening up a million-dollar facility. It does not take into consideration low-income needs-based farmers, agribusinesses, middle-income home gardeners, high-income entrepreneurs, farmers' associations, and cooperatives. Torpedopot<sup>™</sup> believes that each stakeholder has the potential to play an integral role in the developing food strategy initiative. Each of the urban agriculture's components - production, processing, and distribution is linked to a variety of economic benefits. Torpedopot<sup>™</sup> is taking a synergistic approach to urban agriculture. Torpedopot wants to collaborate with "Your City" 's city agencies and agricultural segments to develop a growing solution that will substantially increase revenues from multiple sources, provide healthy food to all of its citizens, create jobs and opportunities, boost morale, invigorate local businesses, promote bio-diversity, and create hope.

#### Internal Rate of Return

Torpedopot's products allow growers to achieve payback periods of less than a year and can generate IRRs of between 50-100% across a broad spectrum of crops and herbs. The attractive return profile is mostly attributable to its low operating costs in comparison to those borne by farmers that use traditional techniques to grow their crops.

#### Mobile, Scalable, and Inexpensive

Torpedopot<sup>™</sup> is highly scalable, inexpensive and allows substantially more growth. Torpedopots<sup>™</sup> economic return profile is substantially more attractive When it comes to providing an abundant amount of nutrient-dense foods directly to end consumers in the most cost-effective way possible, Torpedopot<sup>™</sup> is the clear solution.

#### **Outdoor and Urban Solutions**

Currently, vertical farming takes place inside of expensive facilities that cost millions of dollars in operating expenses. Torpedopot™ requires substantially lower up-front capital investments and can be grown inside and outside, thus utilizing sunlight and other

natural resources. Torpedopot<sup>™</sup> can safely and effectively grow food on any surface. Torpedopot<sup>™</sup> can grow crops at sites with polluted soil, non-arable land, on top of the sand in deserts, and in the

middle of floodwaters where natural disasters have wreaked havoc on the surrounding landscape. No matter where Torpedopot<sup>™</sup> is it will generate the highest yields of any other planter currently being sold on the market today.

#### **Reduce waste**

Torpedopot's self-contained growing structures eliminate waste. Inside of Torpedopot's <sup>™</sup> planters, your plant's root systems form cohesive biospheres that connect and absorb virtually all of the water and nutrients that enter into their environment. When using Torpedopot<sup>™</sup>, there is no wasted water, soil, fertilizer, chemicals, efforts, and space. Everything that flows into the pot gets absorbed by the plant's root systems resulting in stronger and faster-growing plants. Torpedopot<sup>™</sup> uses 95% less water per acre compared to traditional farming methods. Surface evaporation is virtually eliminated as water enters the pot and feeds plants roots below the surface of the soil.





## **Immediate Benefits**

#### Plant management

Torpedopot<sup>™</sup> allows its users to step away from everyday management and even leave for an entire growing season to return to an abundant harvest. The current "self-growing" planters that are offered on the market today lack this capability. These competitor products use either pre-filled reservoirs that do not



Lettuce Butter Crunch

circulate a fresh supply of clean nutrient-dense water to plants roots or growing mediums that store water for extended periods. Both methods extend the interval between watering but still require active management.

#### Reduce Carbon footprint and ecological damage

Torpedopot<sup>™</sup> possesses the power to eliminate the billions of dollars in ecological damage occurring each year due to nitrogen runoff from farms. Torpedopot's<sup>™</sup> closed system ensures that pollutive runoff from farming does not happen. Anything that goes into Torpedopot's<sup>™</sup> products remains inside or is absorbed by the plant's root systems contained therein, thus accelerating the growth of bountiful nutritious foods.

#### Weather resistant

Torpedopot<sup>™</sup> allows farmers and gardeners to keep a significantly higher proportion of their crops each year, especially when adverse weather conditions arise. When harsh weather patterns persist, Conditions can wipe out entire fields of crops. When farmers adopt poor irrigation techniques and corrupt soil management practices, they place themselves at risk of losing all of the time and capital that they invested in their farm. Torpedopot<sup>™</sup> substantially mitigates shrink by allowing plants root systems to flourish in a controlled environment. When plants do not suffer from water deprivation or poor soil quality, there is a much higher chance they will survive compared to those that do not grow in favorable environments.Torpedopot<sup>™</sup> allows users to avoid losses brought on by storms and natural disasters. Its versatile structure enables users to move their entire planter or just the torpedo portion to a safe environment at the first sign of adverse weather conditions. This invaluable trait that is unique to Torpedopot<sup>™</sup> allows its users to survive floods, storms, cyclones, and hurricanes with minimal effort.

#### **Easy adoption**

Hydroponic, aquaponic, and aeroponic growing systems appear as foreign ideas to most farmers that have spent their entire lives growing plants outdoors in soil. For this reason, alongside the high startup and variable costs associated with these systems, their adoption rates have been anemic in outdoor settings. Torpedopot<sup>™</sup> is different. Torpedopot<sup>™</sup> allows for the seamless growth of an array of traditional crops in soil and other familiar growing media by farmers. Currently, there is a gap in the marketplace between farmers stuck using old-age low yielding and low profit-generating farming techniques and those that have adopted advanced new-age indoor factory farming methods. Torpedopot<sup>™</sup> effectively bridges the gap between old-age farming and new-age farming. It brings an easily understood solution to outdoor farmers that can be implemented seamlessly and allows them to compete successfully with factory farmers.

# **Torpedopot vs Hydroponics**

#### Distance from the marketplace

 Both Hydroponics and Torpedopot can be grown in urban areas. However, Torpedopot is a mobile solution that can be moved indoors and outdoors to take advantage of natural resources. Torpedopot is easily scalable and can expand with your business. Torpedopot you will save you thousands on heating, ventilation and electrical cost.



 Hydroponics is a customized solution that's for specific types of plants. You cant grow watermelons and Lettuce together. If you want to produce different kinds of plants, you must invest an exorbitant

From Garden to Table - Carrots

amount of money for further customization. Torpedopot gives you the ability to grow any plant, in any volume, and within the same space.

 With Torepedopot, you don't need to prepare seeds in a different area or transfer seedlings to a larger container. Torpedopot can accommodate your plants through their full lifecycle. You can grow 8 ft eggplant bushes containing 52 eggplants.Torpedopot's patented technology can make more efficient use of household spaces, backyards, patios, walls, rooftops, basements, window- sills, and indoor areas. Torpedopot<sup>™</sup> will revolutionize and enhance the food supply chain across all dimensions.

#### Cost

- Cost is one of the most significant disadvantages of hydroponic gardening. Both upfront and operational costs tend to be higher for hydroponics than they are for typical soil gardens. With Torpedopot, you only invest in seeds, soil, and water. The soil in Torpedopot can be used indefinitely. Your return on investment can happen in less than one growing season. In one season you can grow 3,000 chives in under 2 sqft yielding a retail value of USD 1,000.00. Our planters pay for themselves.
- Hydroponics is not suitable for our environment. It utilizes too much water. Its concept is based upon our most precious resource, water. Torpedopot uses substantially less water than hydroponics. Torpedopot is the most efficient growing system in the world. It's fully automated to give your plants what they need and when they need it. You don't have to worry about over or underwatering your plants. Torpedopot is designed to give your plants the exact amount of water and nutrition they need. Nothing is wasted!
- Torpedopot requires far fewer fertilizers than hydroponics and traditional gardening. In most cases, you only need a
  teaspoon of supplemental fertilizer a week to feed over one thousands of plants. This is true because Torpedopot
  feeding system is applied fertilizers directly to the roots of the plant. Nothing is wasted or contaminates our environment.

#### **Organic growing**

• You can grow organic fruits and vegetables as well as small trees in your Torpedopot. Torpedopot has been designed to allow fungal communities to thrive. It is scientifically designed to grow your food.

#### **Biodiversity**

- Soil plays host to a robust community of microbes, bacteria, and fungi. These ecosystems support the goal of the Organic program of preserving natural resources and biodiversity. Hydroponics does not contribute to the environments bio-diversity. If you would like to bring back biodiversity to your area, then buy a torpedopot. Torpedo has identified multiple species of insects have returned to their environment as a result of our growing technology. Torpedopot's design encourages fungal growth.
- Torpedopot has a positive carbon footprint. It creates an environment that's beneficial for removing carbon dioxide from the atmosphere. It is assumed that the earth's vegetation may not be able to continue to absorb human carbon dioxide emissions at current rates, which could accelerate climate change and exacerbate its effects. Torpedopot<sup>™</sup> will naturally remediate hundreds of billions of dollars in ecological damage

# **Torpedopot vs Hydroponics**





One-thousand Peppers in 15 ft

#### **Emergencies and power loss**

- Hydroponics is very temperamental. A significant power loss renders hydroponics useless. Power looses can have a substantial impact on the plants quality. When the power goes out, you can expect algae growth, leaks, clogs (minerals precipitating out of solution) and a substantial increase in bacteria. The system must be cleaned prior to putting it back into production.
- Torpedopot is a mobile solution. It has an enclosed system where moisture is trapped in the planter for at least a week. In a sever draught you can water your Torpedopot with rainwater. You can move your plants outside and connect to a rain barrel. Your Torpedopot is designed to thrive in any environment. Our outdoor planters rely on rainwater to supplement your plant's growth.

#### Pesticides

 The need to laser leveling, tilling the land multiple times per season, air injection seed planting, cultivating with large tractors over thousands of hours, and the cost to irrigate, fertilize, and apply pesticides and fungicides are all virtually eliminated. Torpedopot<sup>™</sup> provides an inline irrigation solution that is designed to cause your landscape to thrive. Torpedopot<sup>™</sup> eco-friendly technologies are designed to reduce dependency on gardening tools, agricultural equipment, fertilizers, and water. You can grow more crops doing less work!