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*Working with people to understand change, solve problems and make informed decisions.*

# Hydroponics—How to Begin a Business and Career Opportunities

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# What is a Hydroponics?

Hydroponics is a way to skip the soil, sub in a different material to support the roots of the plant, and grow crops directly in nutrient-rich water. There are multiple approaches to designing hydroponic systems, but the core elements are essentially the same.

- **Fresh water.** We're talking primo, filtered stuff with a balanced pH. Most plants like water with a [pH level around 6–6.5](#). You can adjust the acidity of your water with over-the-counter solutions found at your local hardware store.
- **Oxygen.** Don't drown your plants! In traditional farming, roots can get the oxygen needed for respiration from pockets of air in the soil. Depending on your hydroponic setup, you will either need to leave space between the base of your plant and the water reservoir, or you'll need oxygenate your container (think of bubbles in a fish tank), which you can accomplish by buying an air stone or installing an air pump.
- **Root Support.** Even though you don't need soil, your plant's roots still need a little something to hold on to. Typical materials include vermiculite, perlite, peat moss, coconut fiber, and rockwool. Stay away from materials that might compact (like sand) or that don't retain any moisture (like gravel).
- **Nutrients.** Your plant is going to need plenty of magnesium, phosphorus, calcium, and other nutrients to stay healthy and productive — just like plants growing in the ground need healthy soil and fertilizer. When you're growing plants without soil, this “plant food” must be included in the water that's feeding your plants. While you can technically make your own nutrient solution, it's easy to buy mixtures online and in stores.
- **Light.** If you're growing your plants indoors, you might have to invest in some special lighting. Each kind of plant will have a different requirement for the amount of light it needs and for the placement of lights (typically referred to as Daily Light Integral or DLI).

# Careers in Hydroponics?

The field of hydroponics can offer a few different careers, none of which require more than a bachelor's degree to find work. The field requires people who grow the plants, people who sell the equipment and those that teach the field to others.

While formal education is not required, due to the technical nature and the equipment needed for this field, some technical training is helpful.

From outer space to greenhouses, plants can be grown with hydroponics in a variety of environments. Increased yields, larger plants and tighter control are all benefits of hydroponic growth.



# Careers in Hydroponics?

## Journalist

National average salary: [\\$47,647 per year](#)

**Primary duties:** A journalist is a news professional who researches and reports on events relevant to the public. Journalists often specialize in fields in which they have advanced knowledge. For example, journalists interested in hydroponics may pursue a career as an agricultural reporter. These professionals may have the opportunity to work in different fields, including print, online, radio and television media.



# Careers in Hydroponics?

## Professor

National average salary: [\\$53,332 per year](#)

**Primary duties:** A professor is an educator who works at an institution of higher education such as a college, university or technical school. Professors develop coursework, assignments and examinations to help students learn new skills and information and to test their academic development and knowledge. They commonly possess expertise in the fields they teach the students, such as agriculture, horticulture or biology. This allows them to share their in-depth knowledge of the field and help students progress toward a career in their area of expertise.



# Careers in Hydroponics?

## Grower

National average salary: [\\$58,338 per year](#)

**Primary duties:** A hydroponic grower produces crops using a hydroponic nutritional system. These professionals are responsible for caring for plants throughout their development, including providing plants with the nutrient solutions they require to grow, protecting plants from pests, ensuring their environment allows for successful growth and providing basic maintenance to the plants. A hydroponic grower may also be responsible for deciding when a plant is ready for harvesting. Additionally, they may suggest treatment plans for plants to adjust to unforeseen circumstances.



# Careers in Hydroponics?

## Equipment manager

National average salary: \$60,336 per year

**Primary duties:** An equipment manager is a professional who oversees the maintenance and use of equipment, such as equipment necessary for hydroponic growing. They're responsible for ensuring that a company has all the equipment it requires for daily operations and that equipment remains in a functional state. They may perform inspections on equipment to ensure it's operating as intended and decide when a company requires new equipment, choosing which equipment to purchase and negotiating prices.





# Careers in Hydroponics?

## Sales representative

National average salary: \$64,346 per year

**Primary duties:** A sales representative pitches a company's products or services to potential customers. In this industry, a sales representative might sell products like hydroponic equipment, seeds or other tools that support healthy plant growth. These professionals may meet with customers at the customer's place of business or contact them over the phone or via email. They're responsible for knowing about the products they sell, which helps them answer questions potential customers may have. They also typically provide a compelling pitch for why the product or service would be beneficial to the potential customer.



# Careers in Hydroponics?

## Agricultural equipment technician

National average salary: \$77,704 per year

**Primary duties:** An agricultural equipment technician is a trade professional who specializes in the maintenance and repair of the equipment people use on a hydroponic farm. Their responsibilities may include performing routine checkups on equipment, troubleshooting problems when equipment isn't functioning as intended and repairing damaged equipment. An equipment technician often specializes in servicing equipment related to a single industry or equipment of a specific type, providing the expert care necessary to keep complicated machinery working properly.



# Careers in Hydroponics?

## Project manager

National average salary: \$73,796 per year

**Primary duties:** A project manager is a mid-level or senior-level professional at a company responsible for overseeing the planning and execution of projects. They commonly work with a team of employees, delegating tasks to members of the team as needed to ensure they complete the project on time and to the expected quality levels.

For example, a project manager may develop a recording method for a hydroponic experiment, helping team members track their work more effectively. A project manager may also meet with senior- or executive-level staff members at the company to discuss goals and ensure that the projects they oversee work toward the larger goals of the company



# Careers in Hydroponics?

## Tips for a career in hydroponics

If you're interested in a career in hydroponics, consider these tips:

### Earn a bachelor's degree

If you're interested in working in the agricultural field, such as on a hydroponic farm, having a degree in a relevant field can benefit you during your job search. Consider choosing a major such as horticulture, which can provide you with advanced knowledge related to your chosen career path. You may also take classes that offer specialized training in relevant techniques of hydroponic crop growth to provide you with the education necessary for career success. Additionally, earning a bachelor's degree in your field can improve your resume, which may distinguish you from other candidates when you're applying for positions.

### Earn experience

Earning relevant experience can benefit you if you're seeking work in hydroponics. If you attend a college, university or technical school, consider seeking an internship opportunity with a hydroponic farm. This allows you to gain practical experience in the industry, which you can apply to your career. It may also help you identify a farm you wish to work for after you graduate. Additionally, previous experience may make you a more appealing candidate to hiring managers and help you succeed in a new position.



# Careers in Hydroponics?

## Continue learning

While hydroponic gardening is a traditional practice that farmers have used for hundreds of years, modern farming incorporates many newly developed technologies and techniques. By continuing your education in agriculture, hydroponics and other farming practices, you can ensure your knowledge of the field includes the latest developments. This can help you be more productive as a hydroponic farmer and make you a more appealing candidate for positions in the field.

## Engage with professional associations

Networking can be a valuable method of finding work in the hydroponic field, and joining a professional association can be an effective way to build your professional network. Groups such as the U.S. Hydroponic Association and the Hydroponic Society of America are professional associations that hydroponic farmers can join. Engaging in events that these associations host can help you make connections with other hydroponic professionals, which can be beneficial both when you're seeking job opportunities and performing your work in the field.



# What is a Hydroponics Farm Business?

A hydroponic farm business grows and sells plants, vegetables, grass, and other forms of greenery to businesses and individuals.

Examples of such businesses include grocery stores and restaurants. The twist to this style of business is water solvent is used to grow the plants rather than soil. Hydroponic farm businesses are usually located indoors. In many instances, these indoor environments are greenhouses.

This business is an excellent way to give back to the community. Hydroponic farm business owners provide people with high-quality, nutritious, and tasty produce. These businesses also grow lovely flowers and other forms of greenery that beautify the local community.

Furthermore, hydroponic farm businesses benefit the local environment as they are environmentally-friendly compared to conventional methods of farming.



# Start a hydroponic farm business by following these 10 steps:

1. Plan your Hydroponic Farm Business
2. Form your Hydroponic Farm Business into a Legal Entity
3. Register your Hydroponic Farm Business for Taxes
4. Open a Business Bank Account & Credit Card
5. Set up Accounting for your Hydroponic Farm Business
6. Get the Necessary Permits & Licenses for your Hydroponic Farm Business
7. Get Hydroponic Farm Business Insurance
8. Define your Hydroponic Farm Business Brand
9. Create your Hydroponic Farm Business Website
10. Set up your Business Phone System

# STEP 1: Plan your Business

A clear plan is essential for success as an entrepreneur. It will help you map out the specifics of your business and discover some unknowns. A few important topics to consider are:

- What are the startup and ongoing costs?
- Who is your target market?
- How much can you charge customers?
- What will you name your business?



# What are the costs involved in opening a hydroponic farm business?

You need a space to grow your produce and other items.

Most hydroponic farms require a greenhouse. Greenhouses can be built, rented, or purchased in all different sizes. Plan on spending anywhere between \$10,000 and a couple hundred thousand dollars to build such a space. Greenhouses can be as small as a couple hundred square feet or as large as several thousand square feet. The exact cost hinges on the size of the facility you have in mind.



# What are the costs involved in opening a hydroponic farm business?

Your hydroponic farm will require seeds, water solvent, lighting, grow tunnels, climate control systems, UV filtration, racks, towers, and nutrient reservoirs.

Plan on spending at least several thousands of dollars for these supplies.



# What are the costs involved in opening a hydroponic farm business?

Furthermore, your business will require office supplies, a computer for research, a high-speed internet connection, a desk, chairs, and possibly a cash register. You will also need a vehicle to transport your plants and produce to customers. Budget at least a thousand dollars for the office sundries. You can use your own vehicle if it has ample cargo space.



# What are the ongoing expenses for a hydroponic farm business?

The hydroponic farm requires labor, insurance, seeds, equipment, utilities, delivery vehicle upkeep, and a facility such as a greenhouse. Hydroponic farm employees typically make between \$12-15 per hour. It will cost at least a couple hundred dollars per month to maintain and fuel your delivery vehicle. Budget several hundred dollars for utilities as your hydroponic farm will require a significant amount of water and light to spur plant growth. Equipment won't last forever. Plan on spending at least \$200 per month for equipment upkeep and equipment replacement.



# A hydroponic farm business

## Who is the target market?

The target market is local restaurants and supermarkets. However, some hydroponic farms sell directly to the public.

## How does a hydroponic farm business make money?

This business makes money by selling produce, flowers, plants, grass, and other green items to customers. Customers include everyday people, restaurants, supermarket stores, schools and universities, and other facilities that serve food or buy plants.

## How much can you charge customers?

You can charge a wide variety of prices. The exact prices you charge hinges on the items you grow and sell. The prices also hinge on your local market's supply and demand. Specialize in a certain type of produce, grass, flower or other item and customers will be more than willing to pay a significant amount of money for your unique offering.



# A hydroponic farm business

## How much profit can a hydroponic farm business make?

It is possible to make several hundred thousands of dollars per year. However, if you start out with a fairly small greenhouse or face a competitive market, your profits might not be that lofty. If you find enough customers, grow delicious produce, and have little competition, it is possible to grow your hydroponic farm business into an entity that generates millions of dollars per year.



## How can you make your business more profitable?

Consider selling directly to customers. Subscription farming will also create an additional revenue source. If you sell items beyond produce, you will expand your customer base. Consider growing and selling herbs, general plants, flowers, grass, and even turf.



## What will you name your business?



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