



# 5 FRUITS TO GROW IN HYDROPONICS



Thank you for downloading this guide!

As a part of our series on the different crops you can grow in hydroponics, welcome to part 2. In the first guide, we focused on five leafy greens and vegetables that you could grow hydroponically. In this eBook we are going to focus on fruits and berries.

We are going to discuss some general rules for growing **tomatoes, chillies and peppers, strawberries, gooseberries and melons.**

# 5 Fruits You Can Grow Hydroponically

## Tomatoes

Miles Kington once said, "Knowledge is knowing that a tomato is a fruit; wisdom is not putting it in a fruit salad". So even though tomatoes might not be the first crop that comes to mind when fruits are being discussed, a fruit is classified as such if it develops from a flower. Along with other plants like potatoes, peppers and eggplants, tomatoes are a member of the nightshade family. They are commonplace in most veggie gardens and thanks to their general unfussiness, tomatoes are also easily cultivated in hydroponic systems. To get started, you can either sow tomato seed, propagate them from cuttings or purchase seedlings from retail suppliers. Keep in mind that soil-grown tomatoes may contain pathogens which spread easily in hydroponic systems, so if you do buy soil-grown tomatoes make sure they are from reputable growers. Expert growers recommend carefully selecting your tomato variety. Tomatoes are classified as determinate and indeterminate cultivars. Determinate options are great for small spaces as they have a more compact growth habit. Indeterminate cultivars grow like vines and therefore require staking or trellising. Indeterminate cultivars can also potentially yield more throughout a growing season.

Also, keep an eye out for disease-resistant or tolerant varieties to limit the amount of effort needed to control them. Some growers report ebb and flow hydroponic systems as the best option for tomatoes. If you are growing your tomatoes in an indoor system, make sure you are able to install grow lights. Tomatoes grow best when daylength ranges between 12-18 hours. Tomatoes also prefer warm temperatures, so either stick to the natural growing season or consider increasing the ambient temperature during the cool season in indoor systems.



## Chillies & Peppers

From the spiciest of chillies to the sweetest of peppers, there is a never-ending supply of varieties that you can grow to suit every taste. If you are a commercial grower you might be able to find a niche in your market by growing rare varieties. Companies like as The Hippy Seed Company are stockists of many interesting flavours and forms of chillies. (<https://thehippyseedcompany.com/product-category/rare-chillies/page/20/>) .Like tomatoes, chillies and peppers can be propagated from seed, cuttings and seedlings in hydroponics. If you would like to receive a quicker



harvest and streamline the process then consider starting with seedlings as opposed to seeds. Many growers recommend using dilute nutrient solutions for chillies and peppers. Both are suited to deep water culture, wick and ebb and flow systems. Depending on the mature size of your selected variety, it is recommended that you plant your seedlings 45-60 centimetres away from one another.



## Strawberries

Did you know that approximately 27 tons of strawberries and 7000 litres of cream are enjoyed by fans at the Wimbledon tennis tournament every year? The tournament occurs in the UK summer time when strawberries are in their prime. When grown traditionally, strawberries are summer crops and thrive in the warmer weather. Luckily, if you have an indoor or climate-controlled hydroponics system you can enjoy delicious strawberries all year round. Growers



recommend using the nutrient film technique, ebb and flow, deep water culture or drip systems to grow berries hydroponically. You can either start your berries from seed, runners or professionally grown seedlings. By using seed, you may be able to get more plantlets for a smaller investment, but these plantlets will reach maturity later than those grown from the runners. If you are looking for an almost immediately harvestable crop, then buy seedlings from a reputable supplier. When planting your seedlings, thoroughly clean all the soil from the rootzone. If you are a beginner grower, you

might find substrates like expanded clay pebbles, coir, perlite, or rockwool make the process a bit easier by keeping the plants supported and hydrated. If you have an indoor system, you may need to hand pollinate your flowers. You can do this by transferring pollen between flowers using an ear bud, or by gently rubbing two flowers together. Like we mentioned, strawberries grow in warmer weather when day temperatures rise above 18 degrees Celsius. To improve flavour and sweetness in your berries, lower night temperatures to below 10 degrees Celsius if possible. With bright light, sufficient nutrient levels and adequate pest and disease control you can expect between 150-400 grams of strawberries per plant.



## Cape Gooseberries

Cape gooseberries are one of the easiest fruits you can grow, and you can expect your first harvest to be ready in as little as 5 months from sowing your seed. While gooseberries are not one of the most popular crops grown hydroponically, their easy cultivation and overall low maintenance requirements will make them a perfect option for hydroponic growers. To start your gooseberries, get yourself some seed and start sowing. To find out how we do this, keep an eye out for an upcoming video on how we do this! If seed are hard to come by, you can also purchase some seedlings.

Transplant your young seedlings into the hydroponic system after you have thoroughly cleaned the roots. If you have an outdoor system with mild winters, you can even grow your gooseberries through the cooler months. The plants will continue to grow, albeit at a slower rate compared to the warmer months, provided the temperatures never drop below freezing. Depending on how large your gooseberries



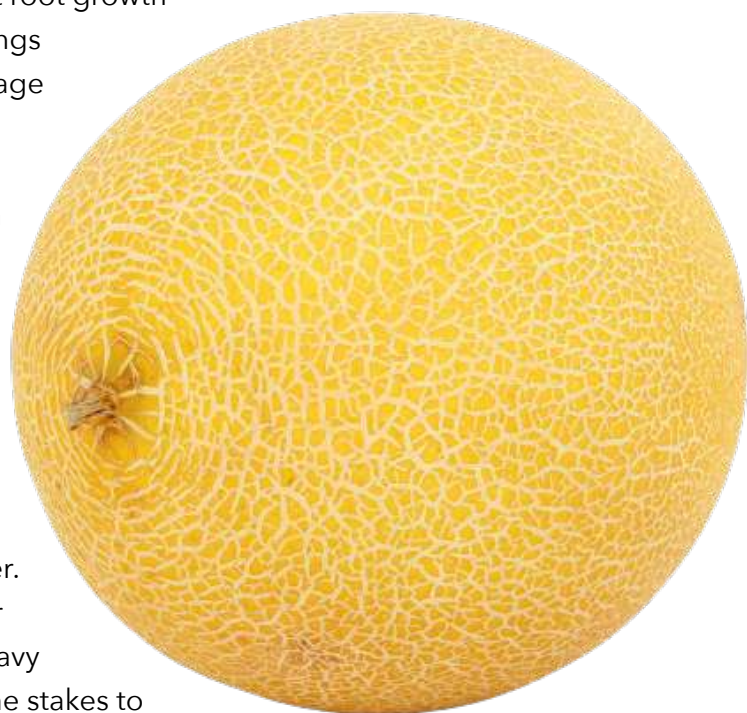
grow, you may need to stake or trellis them. While there is very little information available on the exact requirements for gooseberries in hydroponics, because they belong to the same botanical family as tomatoes you can follow the rules laid out for tomatoes as we described earlier. One scientific report states the plants benefit from a 100% Steiner nutrient solution. After your plants have started to flower you can expect the fruit to be ripe and ready for harvest 70-80 days later.

## Melons

Melons are members of the Cucurbitaceae family of plants, along with cucumbers which we discussed in our first video. There are numerous varieties of melon, and it is important to select the correct varieties best suited to cultivation in hydroponics. To select your cultivar, consider these points:

1. Generally, melons are best grown in warm weather with similar conditions to the heat of the African climates from which they originate. If you have an outdoor system then grow warm season varieties like cantaloupe melons in the summer and cool season varieties like honeydew melons in the winter. If you have a climate controlled indoor system then you can grow cool and warm season varieties year-round depending on your preferences.
2. Check for resistance to powdery mildew. Many melon vines can be extremely susceptible to powdery mildew. As pathogens can spread in the blink of an eye in hydroponics, it is very important that the varieties you choose be resistant to mildew pathogens.

If starting your melons from seed, expert growers recommend keeping transplantation to a minimum. To achieve this, you can start your seed in rockwool or coir pots and place these directly into the hydroponics system once sufficient root growth has occurred. Make sure you do not let your seedlings become root bound, as any root decay can encourage pythium root rot. If you would like to read more on how melons are best cultivated in different hydroponic systems, check out the journal linked in the references below. In terms of the nutrient solution, you need to ensure sufficiently high potassium levels for optimum flower production and fruit set. Like strawberries in indoor systems, you will need to cross-pollinate the flowers by hand. Unlike strawberries, you will need to discern between the male and female flowers and make sure you transfer pollen from the former to the latter. As they are a vine, melons will need to be staked or trellised as they grow. As melons are a relatively heavy fruit, they can be supported in mesh bags tied to the stakes to prevent additional stress on the vine.



Crop	Temperature range (°C)	pH	EC (mS)
Tomatoes	15-24	6-6.5	2-5
Chillies & Peppers	18-27	6-6.5	2.2
Strawberries	10-13 (night), 18-24 (day)	5.5-6.5 (5.8-6.2 best)	<1.2
Cape Goosberries	15-24	6-6.5	2-5
Melons	22-32	5.5-6	2.2-2.6 (lower before fruit set)

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