Guide To Recommended Growing Procedures

Vegetative Phase

We Realize That There Are Many Different Grow Styles And Every Grow Has Its Own Unique Qualities. With This In Mind, We Have Created This Grow Guide Based On Research We Have Done And Cultivators We Have Talked To, Like You.

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1. After installing your system check that all Qwik-Lok™ connectors are in the locked position and that any other connections are secure.
2. Fill the system with RO (reverse osmosis) water or potable water with a parts per million less than 100.
3. When using a bare root clone make sure to fill the system just below the stem of the plant. If you are using a rockwool plant, fill the system just below the rockwool cube to prevent over-saturation.
4. Plug in the pump for the system. Make sure every site has a good flow of water and aeration coming out of the circulator.
5. Set your water chiller to the desired temperature. Ideal range of 20-21.5 °C
6. We suggest following your desired nutrient's feed regiment. To add sterilisation (H2O2 or Hypochlorous acid) solutions and nutrients to your system, start with your sterilization solutions first. Turn off the pump, open ball value below the funnel and add. Close the ball value and turn the pump back on. Allow a cycle of 30 seconds. You should repeat the process for each nutrient you will be adding. After adding all the nutrients check the pH of the water. If needed, pH adjustments should always be made after nutrients are added. Add pH to the system the same way you would nutrients. Always start small with pH up and pH down as it is very concentrated and a small amount will affect the pH easily. The pH can be checked by using an EC/TDS meter which can be purchased online.
7. Make sure the system's float valve is connected to a water reservoir, it will automatically refill the system as the water level drops below the set level.
8. Now your system is ready to start growing!

WEEK 1

Check your system daily if possible.
Make sure the ppm is in the correct range and also the desired pH level is reached. Add nutrients back into the system as needed.

Example: Started week 1 with 150 ppm, a few days later the ppm dropped to 125. In this case you would add back 25 ppm to reach the desired level of 150 ppm.

Check nutrients ppm and adjust!

Then check pH value and adjust!

WEEK 2

1. Check ppm and pH in the system. Remember to adjust ppm before adjusting the pH.
2. Add Nutrients to the system. The ppm should be higher[1] on week 2 than on week 1. Plants need more nutrients as they grow. Remember the order of adding nutrients. Start with sterilisation solution, then base nutrients.
3. After adjusting ppm and pH, turn the system on.
4. Set the **water chiller temperature to 21°C.**
5. While the system is operating, do a health check on the plants. Check each plant's foliage for spotting or discoloration. Lift the plant's net pot out of the system to check the roots. You want roots to be white with lateral root growth.
6. Check ppm and pH of the system daily if possible. Add nutrients back into the system as needed. **Example:** Started week 2 with 225 ppm, a few days later ppm dropped to 175. Now add back 50 ppm to reach the desired level of 225 ppm.
7. Defoliating – Week 2 is a good time to lightly start cutting off large leaves at the top of each branch. This will allow more light to penetrate to the small lower branches. The goal is to train the branches to grow evenly in an upward manner in order to make a more manageable, consistent canopy.

Check nutrients ppm and adjust! | **Then check pH value and adjust!** | **Defoliating**

WEEK 3

1. Before making any ppm or pH adjustments it is time to do a full system drain and refill with fresh RO water. Make sure to have enough water in your reservoir to refill the system quickly. The water in your system can be poured down a drain or repurposed in your garden. Most areas allow this, but check to make sure it is permissible.
2. While the system is draining, conduct a plant health check. Check the leaves and roots while the water is draining.
3. Fill the system to the same level as week 1 and week 2. Start the system. Make sure all circulators are working.
4. Follow your feed schedule and add nutrients to the desired ppm. Start with H2O2, Cal-Mag, then base nutrients.
5. Adjust pH if needed.
6. Set the **water chiller temperature to 20°C.**
7. Throughout Week 3 continue lightly defoliating to allow better growth to all tops of branches.
8. At the end of Week 3 you can decide to start the flowering phase or continue thevegetative phase. This is up to you as some like to grow larger plants.
9. If you decide to start the flowering phase the system will need to be drained at the end of week 3 and refilled before starting the first week of flower.

Change Water | **Check nutrients ppm and adjust!** | **Then check pH value and adjust!** | **Defoliating**

WEEK 4

1. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember, start with H2O2, Cal-Mag, then base nutrients.
2. Adjust the pH if needed.
3. Lightly defoliate throughout the week. On the last day of vegatative growth it is good to defoliate more than usual so that each bud site will have enough light to start growing. You will not need to defoliate again until the end of Week 4 flowering phase. Keep in mind that defoliating style is completely up the grower.
4. Check the ppm and pH of the system daily if possible.
5. At the end of Week 4 you can decide to start the flowering phase or continue to vegetative phase. This is up to the grower as some like to grow larger plants.
6. If you decide to start the flowering phase, the system will need to be drained at the end of week 4 and refilled before starting the first week of flowering.
7. If you decide to start flowering your plants make sure to set your light schedule to 12 hours ON and 12 hours OFF. During the night period the room should be pitch black. Any light leaks may stress the plants and cause slow growth.

Check nutrients ppm and adjust! | **Then check pH value and adjust!** | **Defoliating**

[1] The ppm is typically nutrient dependent. We recommend that the grower consult their selected nutrient feed baseline chart.

Continue vegetative phase

Change light schedule to 12/12 hrs.

Start flowering phase

Flowering Phase

Hi,
I'm Tom Green,
your expert for HydraMax Systems. If you have any questions, contact me!

When to move to Flowering Phase?

This is determined by personal preference. If the grower has sufficient space for a large canopy and wants to grow massive plants to the lights, remain in the Veg stage. If not, move to the Flower stage. Keep in mind that if the root mass becomes too large, it could clog the system. Purchase a Root Riser from Hydra Unlimited if you think you will have a larger root mass.

WEEK 1

Change Water

1. Before starting make sure the water has been drained and refilled to desired level.
2. When adding nutrients to start the flowering phase the only change will be the type of nutrients used. Usually there is a Veg line and Flower/Bloom line.
3. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember, start with H2O2, Cal-Mag, then base nutrients.
4. Adjust the pH if needed.
5. Check ppm and pH of the system daily if possible.
6. During the Flowering phase you will not have much defoliating or plant training. This is a good time to dial in your environment for optimal plant growth.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 2

1. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember the order of adding nutrients. Start with H2O2, Cal-Mag, then base nutrients.
2. Adjust the pH if needed.
3. This week the plants will grow taller each day. Make sure to have support for the top branches if they get too tall. Most growers will use a net or plant cage for support.
4. Continue the week doing health checks on plant foliage and roots.
5. Check ppm and pH of the system daily if possible.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 3

Change Water

1. Before making any ppm or pH adjustments, the system will need to be drained and refilled to desired water level.
2. While draining to do a health check on plant roots and foliage.
3. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember, start with sterilisation solution, then base nutrients.
4. Adjust the pH if needed.
5. This week plants will continue to grow taller. This is the last week of stretching (the natural vertical growth response in the early stages of flowering). Support your plants with another trellis net or adjust your trellis nets as needed. Run health checks on plant foliage and roots.
6. Check the ppm and pH of the system daily if possible.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 4

1. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember the order of adding nutrients. Start with sterilisation solution, then base nutrients.
2. Adjust the pH if needed.
3. Run health checks on plant foliage and roots.
4. Check ppm and pH of the system daily if possible.
5. On the last day of Week 4 Flower you can do a moderate defoliation (Day 28) We understand each grower has different definitions and expectations to what they may or may not want to remove. The defoliation process is determined by each grower. Some growers have "proven" methods to removing leaf mass from the canopy and training their plants, while others shape by interpreting the actual branch growth.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 5

Change Water

1. Before making any ppm or pH adjustments, the system will need to be drained and refilled to desired water level.
2. While draining do a health check on plant roots and foliage.
3. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember the order of adding nutrients. Start with H2O2, Cal-Mag, then base nutrients.
4. Adjust the pH if needed.
5. Continue the week doing health checks on plant foliage and roots.
6. Check ppm and pH of the system daily if possible.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 6

1. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember the order of adding nutrients. Start with H2O2, Cal-Mag, then base nutrients.
2. Adjust the pH if needed.
3. Continue the week doing health checks on plant foliage and roots.
4. Check the ppm and pH of the system daily if possible.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 7

1. Start the week by following your feed schedule and adding nutrients to the desired ppm. Remember the order of adding nutrients. Start with sterilisation solution, then base nutrients.
2. Adjust the pH if needed.
3. Set the **water chiller temperature to 19°C.**
4. Continue the week doing health checks on plant foliage and roots.

Check nutrients ppm and adjust! | **Then check pH value and adjust!**

WEEK 8

Change Water

1. Before making any ppm or pH adjustments, the system will need to be drained and refilled to desired water level.
2. If this is your last week of growth for the specific strain in your system, We recommend following the chosen procedures you feel comfortable with. For example: Start flushing the plants by using lower strength base nutrients and sterilisation components only for the last week.
3. It is important to follow the desired nutrients bases directions if you wish to continue flowering. The goal is to effectively allow your plant to ripen based on what you've chosen to cultivate.
4. pH adjustments are always necessary if outside 5.5-6.5
5. At the end of Week 8 Flower your plants will be ready to harvest. The harvesting process also involves a personal preference such as wet trim over dry trim. Science proves a dry trim will have better results while others prefer not to trim at all and only remove the fan leaves, as the sugar leaves provide protection of the trichomes and flower over the dry and cure process.

A Word On Flushing/Leeching

Science recommends that nutrients should not be removed from plants until the final days before harvesting. If nutrients are removed too early, it can weaken the plant's ability to resist diseases and molds. However, growers often believe in starving the plant towards the end to encourage flower maturity or removing nutrients (whether from organic or synthetic sources) to prevent the plant from absorbing them. Professional growers have discovered that not all the salinity is completely removed from the substrate. As a result, each grower has their own unique approach to this process.

The Drying Process

Slow drying is key to achieving high-quality results when drying flowers. The method used is a matter of personal preference; large-scale growers tend to use a production facility, while small-scale growers cut the plants at the stem's base and hang them to dry slowly. This allows for a gradual conversion of THC-A into THC and a slow, low-temperature preservation. To achieve optimal flavor and quality, dry the flowers at 15-16°C with 60% maximum humidity for at least 14 days.