



grow your **OWN**



Nursery™

Grow Manual



BC NORTHERN LIGHTS
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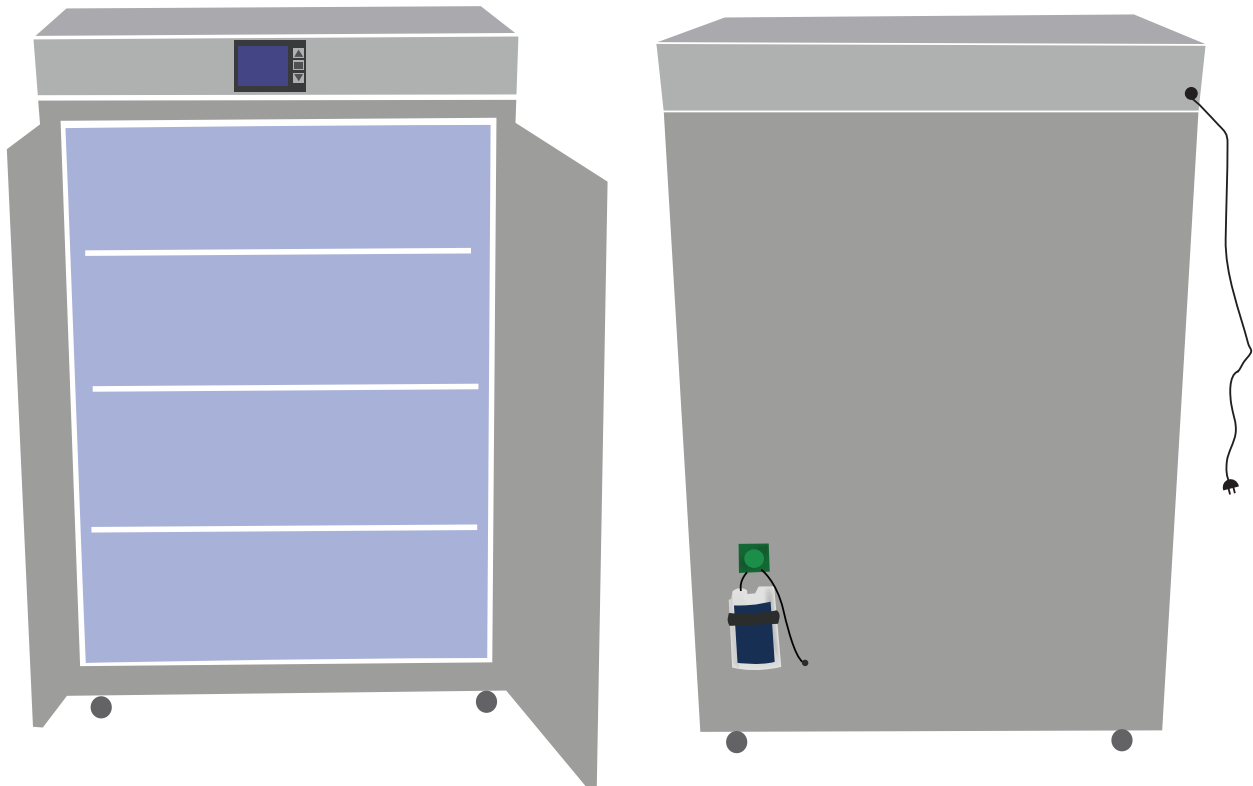
Growing in Your Nursery

Before you begin using the Nursery there are a few basic things you should know about growing in the machine:

These manuals provides you with detailed instructions to get your machine set up and growing. If there is any confusion or questions, contact your BCNL rep, and we will make sure you get everything done and set up correctly.

Your environment - Ambient room temperature should be 68 to 72 degrees. Humidity is optimal at 80% for early vegetation and 60% for later vegetation. Keep in mind that these are optimal conditions and your plants will put up with a wide variance. If you need any assistance meeting these desired conditions, please contact BCNL support at 1-866-933-3269

The Nursery is made to handle the early stages of growing. From starting with seeds, and up to the time your plants are ready to be kicked into the flowering stage. This vegetative growth requires 24hrs – 18hrs of light a day in the blue wavelength.



Growing from Seed

- Soak seeds in a cup of pH-balanced (5.6) water overnight. Do not let seeds soak more than 24 hours unless case remains uncracked. When casing is cracked, seeds are ready to be placed in your one inch rock wool cubes.
- Soak rock wool in PH balanced (5.6 – 6.2) water for at least 4 hours so water can acclimate to room temperature and rockwool has a chance to get fully soaked. Give them a squeeze to remove about half the water.
- Sew one seed in each rock wool cube. Place seed about 1/2 inch down center of cube with tap root pointing down.
- Place rock wool cubes into the clone dome and place the lid on.
- Place on your bottom shelf with the lights off.
- The seedling will begin to germinate over the next few days. As soon as growth is visible from the top of your cubes, it is important to turn on your T5 lights in your Nursery.



HELPFUL HINT

Keep rock wool moist, but do not over water. There should not be free standing water in the bottom of the dome.

When seedling has sprouted and leaves have formed you can water with a very mild grow mixture (1ml/cc Grow A&B, and Voodoo Juice per gallon or 4 Litres). This is a critical stage in training a healthy aggressive plant. Keep an eye on them and hand water when they are at about 10% moisture level. Your clone dome will help keep the moisture in and should be lifted once daily to allow new air circulation. If your dampers remain closed and your ambient room temp is optimal it should stay moist for days.

Propagation

Clone Dome - The clone domes provided are used to propagate roots from seedlings or cuttings. The seedlings are grown in the dome until a good root system is visible protruding out of the 1-inch rock wool cubes.

The close proximity to the bulb will allow water to condense on the inside of the lid to create the warm humid environment (80%) that is needed during the propagating stage. In approximately 7 days roots should be visible out the bottom of the cubes.

Begin hardening the plant by slowly opening the vents and then raising the clear dome over the period of a few days. This will get the plants used to the outside environment.

Transplanting Seedlings

Once the clones or seedlings have established roots and sat uncovered for a day or two you can place them into the larger 3-inch rock wool cubes.

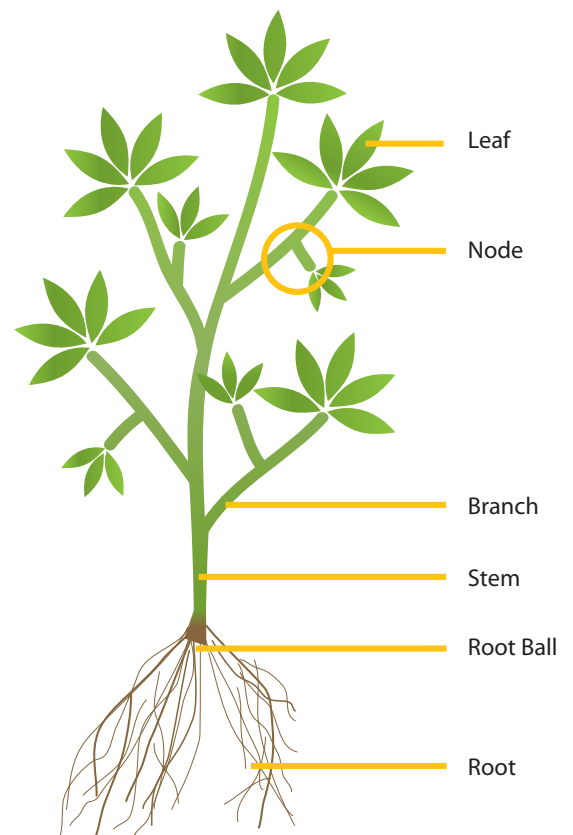


HELPFUL HINT

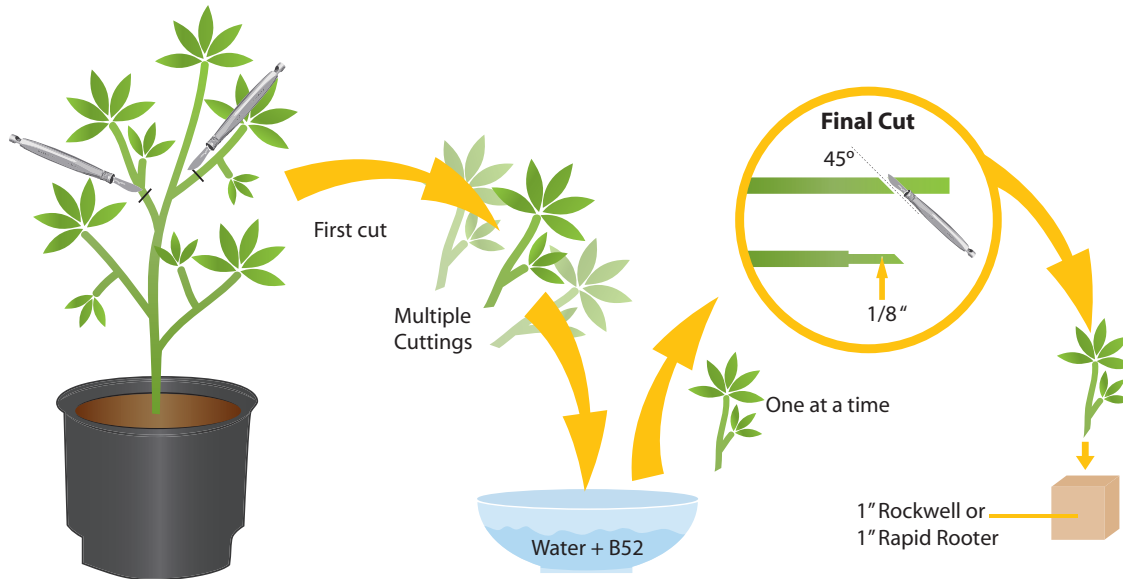
Presoak your 3" rockwool with a mild grow solution before placing the 1" rooted rockwool inside. This will act as your first hand watering.

You have 4 shelves in your nursery. The bottom shelf, shelf 1, is used for the beginning stage of seedlings, and the top shelf, shelf 4, is used for the late stage of your vegetative growth before they are ready to be planted. So with every stage of growth in the vegetative stage, move them up a shelf. You will notice the top shelf has more room for the plants than the bottom one.

Plant Basics



CUTTING CLONES FROM A MOTHER PLANT



Set up cloning station. You will need: Bowl of water, scalpel, clean cutting surface, rooting gel, rooting medium, clone dome. Optional items: B52 or Organic B, Isopropyl Alcohol

- Choose a mother plant that is at least 6 weeks old before taking cuttings.
- Presoak 1 inch rock wool cubes in a mild pH balanced grow solution for 30 minutes. You can mix in a light solution of JumpStart and VooDoo juice to assist root development.
- Mix up a bowl of pH balanced water (and light B vitamin if you have it).
- Using a scalpel, cut a 45-degree angle across a firm branch about 3 to 4 inches from the end of the branch. Make sure you have at least 2 sets of leaves on the end. When cutting your branch, make the cut halfway between sets of nodes.
- Immediately place multiple cuttings in the bowl of water. This will prevent air bubbles from getting trapped in the center of the stem and the B vitamin will reduce shock.
- One by one, take each cutting out of the bowl of water and make a final 45 degree cut at the bottom. You can also shave off the sides of the tip up to about 1/8" to stimulate lateral root development
- Take the bottom end of cutting and dip in rooting gel and place in 1" rockwool cube. Be careful not to rub off gel when pushing the clone into the cube.
- Place cubes in your clone dome. Place the clone dome on either shelf 3 or shelf 4.



HELPFUL HINT

Try making your final 45 degree cut under water to ensure no air bubbles are in the stem.

MIXING NUTRIENTS

With every Nursery we have included a Rubbermade Mixing tub w/ drain hose and a measuring syringe. These are used to drain your nutrients from the reservoir and to mix your nutrients for filling and drain back into the reservoir. The measuring syringe is used to pull up the amount of nutrients that the feeding schedule calls for. We have teamed up with Advanced Nutrients to develop the ultimate feeding schedule. If you have purchased an Advanced Nutrients Package from us, refer to the nutrient recipes.

DRAINING AND FILLING RESERVOIR

ADDING NUTRIENTS

- To add nutrients to your reservoir, you will have to fill your mixing tub 2 times to get 80L's of water in your reservoir.
- If you have a small cart with wheels that you can place the mixing tub on, this will make it easier as the mixing tub is quite heavy when full of water.
- Make sure the valve is closed on your mixing tub and Add 40L's of water to it.
- See your Nutrient chart for the appropriate amount of nutrients to add. (the chart is made for 80L's, so you will have to divide the number in half for 40L's).
- Add your nutrients to your mixing tub and stir well.
- You need to now move the mixing tub to the front of your nursery so you can use your PH sensor to PH balance your nutrient mixture.
- Now you need to PH balance your mixture to a PH level of 5.4. Mix PH UP or DOWN as needed. Careful as a little does a lot, and be sure NOT TO MIX PH UP & DOWN TOGETHER. (only use one).
- Next, have your mixing tub elevated a little higher than your Nurseries reservoir, place the drain hose from your mixing tub in the reservoir and open the valve.
- Once all the nutrients are drained in, close your valve and repeat again for the remaining 40L's.

DRAINING YOUR NUTRIENTS

There is 2 ways to drain your nutrients. If you are NOT using your AUTO PH Control, and if you ARE using your AUTO PH Control.

DRAINING NUTES WHEN NOT IN AUTO PH CONTROL

- If you are NOT using your Auto PH control, simply go to your DRAIN PUMP screen.
- Set your empty mixing tub on the floor near your reservoir and ensure the drain hose valve is closed.
- Take the hose from your DRAIN pump and place it inside your mixing tub and make sure its valve is open.
- Select DRAIN PUMP ON, and run until you have drained your nutrients. DO NOT RUN YOUR PUMP DRY as it will burn it out very quickly.
- Select DRAIN PUMP OFF, then place the hose from your drain pump back into the reservoir. (you will most likely have to repeat these steps twice to empty the reservoir).

DRAINING NUTES WHEN IN AUTO PH CONTROL

If you ARE using your Auto PH, you must first turn of your Auto PH control. The reason for this is when you are in Auto PH mode, your drain pump is used as a water mover mixing the nutrients so that when PH down is dosed, it is evenly distributed.

- Go to your PH SCREEN and select SENSORS AUTO CONTROL OFF.
- Your Drain / Water mover pump should now not be running.
- Set your empty mixing tub near your reservoir and ensure the mixing tubs drain hose valve is closed.
- Place the hose from your Drain pump inside the mixing tub and ensure the pumps valve is open.
- Go to your DRAIN PUMP SCREEN, and select Drain Pump ON.
- Once you have emptied your reservoir select Drain Pump OFF. BE SURE NOT TO RUN YOUR PUMP DRY as it will burn out very quickly.
- You will most likely have to repeat these steps twice to empty the reservoir.

TROUBLE SHOOTING

We put together some trouble shooting tips to help you achieve the best yields possible. Feel free to check out the Attack Pack, which will increase your chances at seeing a glorious yield. Call your BCNL rep for more info.

Spider Mites

These nasty little buggers like to suck the chlorophyll from your plants, which robs them of photosynthesis and will eventually kill them. Telltale signs of spider mites are little webs all over your plants. The easiest way to deal with spider mites is to spray with a commercial pesticide such as Dr. Doom. Never spray commercial pesticides after week 5 of flower and only do so sparingly just before the lights go off for the night. Barricade is a good product to use as it will increase the plants defense system to protect against mites.

1. An organic spray solution:

1/2 tsp baking soda, 1 tbsp vegetable oil, 1 litre spray bottle with water

Mix the baking soda into the full water bottle then pour in the vegetable oil. While shaking constantly, spray the plants from the top and underside. Be liberal with your spraying so you cover the plants. This will coat the bugs and drown them while the baking soda protects from mold and mildew. If you're lucky you will get them before they have bred and you will only have to do this once. More likely you will have to repeat this process after 2 or 3 weeks, as the first round of eggs hatch. By using this organic approach you can spray right up to the beginning of week 7.

Mold and Mildew

To troubleshoot, first check the humidity levels in your environment. Humidity is optimal at 80% for early vegetation and 60% for later vegetation. If you are noticing lots of condensation in your box or the room in which it is stored, a de-humidifier or air-conditioner can help a lot. Anti-fungal sprays such as Serenade can be used on powdery mildew, but be careful to read the manufacturer's instructions.

Included in the attack pack are great preventative products for mold and mildew.



HELPFUL HINT

Mold, mildew, fungus and bugs love dead leaves. Be sure to keep your growing space tidy and free from dead leaves. Keep down excessive vegetation to improve airflow.

NUTRIENT OVERVIEW

BC Northern Lights has teamed up with Advanced Nutrients to offer you the best custom feeding schedule available. If you have any questions, please don't hesitate to call anyone of our 5 helpful reps, who are on call 7 days a week.

The measuring syringe is used to pull the nutrients from the nutrients jug. The unit of measurement on the syringe is CC's, (same as ml's). Same as on recipe.

NUTRIENTS



SENSI GROW - Sensi Grow is the quick and easy way to improve growth and quality of plants. This easy to use two-part formula contains special ratios of premium ingredients like calcium, iron and zinc. Sensi two-part has a comprehensive range of major and minor nutrients carefully arranged so your plants produce an exciting harvest of tasty flowers. These ingredients make stronger, healthier plants, resulting in a better platform for a higher-yielding bloom cycle.



VOODOO JUICE - Voodoo Juice is a miracle of plant science that unlocks the relationship between roots and harvest. Voodoo Juice greatly increases the intake of fertilizers, bloom boosters, carbohydrates and other bloom-enhancing formulas. Not only does Voodoo Juice make roots larger, hungrier and more efficient so you get stronger plants, it makes roots so strong and dense that diseases can't get a foothold.

Nursery Feeding Schedule VEG (21Gal/80L Tub)

15 drops of nutrient solution = 1 ml

WEEK	1		2		3		4		5		6		7	
PPM	100		200		300		400		500		600		700	
Product	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L	ml/CC 1L	ml/CC 80L

Sensi Grow Part A	.34	28	.68	54	1	80	1.3	104	1.75	140	2	160	2.4	192
Part B	.34	28	.68	54	1	80	1.3	104	1.75	140	2	160	2.4	192
Total ppm A+B	<97>		<197>		<290>		<377>		<507>		<580>		<696>	
Voodoo Juice	2	160	2	160										
Total	<97>		<197>		<290>		<377>		<507>		<580>		<696>	