

MASTERING THE BUSHMASTER



The following instructions and suggestions are the result of 3 years of testing and feedback- first by beta testers in the hills of central Humboldt County, then by customers at our retail store, and, finally, by customers all over America who have been kind enough to share their experiences, whether good or bad.

Don't be intimidated or put off by such elaborate instructions. The purpose is to maximize the end user's success. This is an expensive and very powerful product. It would show a lack of concern for customers to simply hand them a bottle with 1 line of instructions and send them on their way. More importantly is that there is no "one size fits all" set of directions because every cultivar is going to react slightly differently. Plus, there are different grow strategies that require slightly different feeding regimens. In order to get the optimum results the product must be "dialed in" or fine tuned over more than one cycle. Of course the product will generally work just fine for most people if they use the minimum dosage suggested in the instructions on the label. However, most growers like to play and this product definitely lends itself well to tweaking!

This product isn't for people who mix their nutrients by eyeball or who turn the jug upside down and add 4 "glugs" or whatever to the reservoir. It's also not for growers who treat a special product like BushMaster as if it were a lottery ticket. They buy it, throw it in the reservoir and hope they hit the jackpot.

If nothing else, the point of these instructions is to impress upon the user the need to be conscientious, to measure carefully, to be observant and, most of all, to be patient.

SOIL

Most of our testing of BushMaster has been done in soil. The first point that needs to be emphasized when using BushMaster is that the plants should not be under stress at the time of application. If the plants are loaded with mites, for example, get rid of them and give the plants time to recover their vigor. If the plants have been allowed to dry out too much and the leaves appear wilted, water them well and wait till the next watering to apply BushMaster. Since many growers tend to overfertilize or don't monitor their ppm, it wouldn't hurt to thoroughly irrigate with plain water before applying BushMaster especially when using a growing medium containing large amounts of coir.

- Many growers have reported improved results by rinsing their plants with water about 48 hours after application. When using soil containing coco or coir fiber, it's imperative to rinse no later than 48 hours after application.
- If in coco fibre Bushmaster should be applied to the roots with caution. It can be applied as a foliar spray at the rate of approximately 1-2ml./ gallon. Use of a wetting agent is highly recommended.
- After applying BushMaster, it's important not to let the soil dry out excessively between waterings.

OPTIMIZING THE DOSE IN SOIL

Fine tuning the dosage for your particular application can make a big difference in your results. For soil, start with no more than 5 ml/ gallon and adjust accordingly. The latest feedback from customers indicates that it's best to use only 1-2.5 ml. (1/4-1/2 tsp.) per gallon at each watering. Some aggressively growing plants may require up to a total of 10 ml. (2 tsp.) over 4 waterings, but it's highly unlikely!

For a few days after dosing, carefully observe your plants for signs of leaf burn or brown spotting. It doesn't happen often and is almost always caused by applying BushMaster to stressed-out plants or to plants which have been overfertilized prior to application. Don't pay attention to any manufacturer that tells you to run their fertilizer at 1400, 1600, 1800 or higher ppm. In general, it's a good rule of thumb to run around 1000ppm and make sure your plants don't dry out excessively between waterings- especially with coco fiber or coir based potting soils. If you want to improve your plants' growth, apply water soluble kelp NOT more fertilizer. If signs of tip burning or spotting should occur, a generous watering without nutrients will usually correct the problem.

While watching your plants to determine the optimum dose, watch for the appearance of the "Ram's Horn Effect" where the leaves turn dark green and start to curl under and around and resemble a ram's horn. That's a sign the dose is too high and should be cut at least in half. Remember, what we are trying to do is find the minimum dose that does what we want. That way we gently influence the plant without throwing it out of balance. More is usually not better!

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USE OF KELP

The use of water soluble kelp extract is strongly recommended. It contains a plant hormone called cytokinins as well as other compounds which complement the action of BushMaster. The best time to apply the kelp is about 2 days before the BushMaster if it's being applied as a foliar spray or about 4 days before if it's being watered in. The best way to apply it is by misting; the effects are noted much faster and the dose required is much smaller. If applied in the water, using about 2 times the suggested dose is probably sufficient. Finally, another dose of kelp extract should be applied about 3 weeks before finish. If using our **Gravity** flower finisher, it should be applied with the final dose of kelp.

In soil, there are 3 different grow strategies where this product can be used to good effect:

1. Short cycle grows where the goal is to transition to flower quickly and finish as soon as possible.
2. Regular cycle grows where the goal is not to finish quickly but to maximize the size and mass of the flowers.
3. Long veg cycle grows where the goal is to veg them as large as possible without worrying about them getting too tall after cutting the light back.

For strategy #1, we want to find the dosage that gives a fast finish without drastically compromising the mass of the flowers. This method is usually applied to plants which have been on a short vegetative cycle. By trying different dosages between 1 ½ ml. and about 7 ½ ml. per gallon (0.25 to 1.5 tsp.), and observing your plants' life cycle at the different dosages, you should be able to choose the dose that gives a good balance between time of finish and mass. Generally speaking, the higher the dose, the faster the finish and the lower the mass. As mentioned before, it's probably best to apply BushMaster in doses of 2 ½ ml. per watering rather than 1 large dose. Dosing should begin when lights are cut back. A new technique that seems to be very effective was first brought to our attention by a tester from "Little Saigon" in Southern California. It involves foliar spraying BushMaster while in vegetative growth at the rate of 1-2 ml. per gallon to plants about 4 inches tall and repeating 2 or 3 more times over a 7-10 day period. With a little practice the plants can be induced to grow tight tennis ball shaped clusters of flowers or popsicle shaped flowers so that large numbers of plants can be grown in less space. This growing style seems to be extremely well suited for vertical grow or **Omega** style systems. Adding **Purple Maxx Snow Storm** at the beginning of flowering will tend to help the flowers fill out better by forcing the plant to direct nutrients strictly toward flower development. For continuous use apply 2 1/2 to 5 ml. per gallon of water (1/2 to 1 teaspoon). Or apply 2.5 to 7 1/2 ml. (1/2 to 1 1/2 teaspoons) per gallon of water once a week. Unlike BushMaster and **Gravity**, much higher doses of **Purple Maxx** can often be used to good effect AS LONG AS PLANTS ARE NOT BEING OVER FERTILIZED! When using Purple Maxx be sure to run nutrients at less than 1000 ppm. In hydro, for example, it's not unusual for a reservoir at 1200 ppm to drop to 900 ppm almost overnight because **Purple Maxx** causes an uptake of nutrients unlike anything we've ever come across.

For strategy #2, the important question we need to answer is: What is the smallest dose that makes the flowers develop, fill out and put on the most mass compared with the untreated ones. It may not be obvious until the very end. Don't assume that the ones that start flowering first or look the best in 3 weeks are going to be the best at the end. It's like a horse race: It's not over till it's over. Even if your goal is not to shorten the flowering cycle, you can expect to shave at least a week off your cycle compared to untreated plants. A lot of users get optimum results by using only 1-2 ml. per gallon when cutting the lights back. It's best to try several different doses to discover the optimum rate. As above, adding **Purple Maxx** at the initiation of flowering will force nutrients toward flower development and increase flower mass.

For strategy #3, the safe way to proceed is to follow strategy #2 and assume your plants will grow up to 4 more inches or so before shifting into flower mode which generally signals the end of the stretch cycle. An interesting observation with some varieties is that the longer the vegetative period the faster the plants will show flowers when the light is cut back. Plus, the flowers develop mass and finish sooner. So for some strains you can veg longer, apply BushMaster and finish in almost the same time frame as a shorter veg and get greater results! As mentioned earlier, this product definitely lends itself to tweaking and playing if you're so inclined.

Please call us at any of the numbers below to check with current tricks or tips or if you just have questions or concerns.

Also Note: We have had many customers report back to us that they have tried running BushMaster in Hydroponic Systems to great effect for 3 days 12-16 days into the Bloom Stage at 1-2mL / Gal. Again, CALL with Questions!