

## LED Grow Master Gardening Tips ©

These tips come from experience, and should be considered to insure success with LED Grow-Master Single Bars and Multi-Bar Arrays. These tips apply to general gardening, and are techniques you are already using. Now you need to develop these techniques with 90% less heat in your system.

- Keep environmental temperatures in the range of 70F° -80F° (Lower Temp = Slower Plant Growth) Monitor root-zone temperature as well. When switching from traditional grow lights it may be necessary to add room heat or a heat mat under your plants. Plants grow slower with less blooming when their environmental temperature falls below 70 degrees F.
- DON'T over water your plants (Less Heat from LEDs = Less water loss due to evaporation.) Over watering = Slow root development = Slow and Stunted Growth and Nutrient Uptake issues
- For plants grown indoors without direct exposure to natural sunlight, or traditional high intensity lights, most growers find that running the LED lights 24 hours a day will produce superior results without negative effects. (some plants require a dark period each 24 hour period to stimulate late season blooming or fruiting)
- Use a more porous medium = more oxygen to roots = higher plant metabolism.
- Water plants once, let them run low on water. This will establish the water usage rate for your plants under LEDs. Maintain this new watering schedule.
- If you keep the root medium saturated = no need for plant to develop larger root system = stomata closure, slow and stunted growth, and symptoms of over watering.
- Monitor your CO2 levels (Our LEDs emit a large amount of absorbed light, therefore may require slight augmentation of CO2 levels (300-500 PPM)
- Start with a lower amount of nutrient (400-600 PPM) or 1/2 the Oz/Gallon, or ml/per Liter recommendation on your plant foods.
- On fruiting plants: Reduced photoperiod = plant stress = more flowering.
- Remember to follow the recommended hanging distance from your plants as determined by the model you are using. Too close will stunt growth. Too far will cause stretching. When raising or lowering the LEDs, move them a few inches at a time and allow time to transition before moving again.
- If your plants are grown indoors, without supplemental light, some plants such as tomatoes may benefit from the addition of a single GE 60 watt soft-white light placed anywhere in the room with the plants. This provides a boost in some wavelengths of light which will encourage fruiting. Many clients use a hybrid HPS/LED system for commercial indoor applications.