

## Gaston Grower Spotlight October 2022



### The Fertilizer Tight Rope

#### Managing Fertilizer Waste

If there has been one subject that every farmer/grower could agree on this year, it's about fertilizer. The prices are high, and all admit that it has put more of a hurt on their pockets than years past. For nursery growers using slow release fertilizers it can add even more of a balancing act to getting the most out of the plant nutrients applied. These slow release fertilizers usually release nutrients in 3, 6, 9, or 12 months' time. This process is often sped up due to high moisture and/or hot temperatures. It is up to the nursery manager to manage fertilizer in a way that the plant has what it needs when it is actively growing and enough nutrients available for winter dormancy without wasting product.

### How can we tell?

The picture above shows a monitoring process called a pour through extraction. A specific amount of water is poured through a saturated container. What leaches out of the bottom of the container is then analyzed. These extractions allow a nursery manager to monitor pH and EC (electrical conductivity). The EC value is what allows the grower to understand how to best manage their fertilizer inputs. During the growing season EC should be between 0.5 mS/cm and 2.0 mS/cm. The EC values should be on the lower end of this range as plants begin to acclimate to shorter days and cooler weather. If values are too high going into the cooler season, plants run the risk of winter injury if its growth period is extended. If the plant isn't actively growing some of the excess fertilizer will not be utilized and will be wasted. Those plants falling below the 0.5 mS/cm may not have the carbohydrate reserves necessary for putting on growth the following spring.

### Saving Money

One local grower set out to determine the difference in 3 similar fertilizers on his operation. The loropetalum crop pictured was potted in late spring in the same pine bark substrate. The only difference between the groups were the fertilizers incorporated into the substrate. The fertilizers performed similar to each other this growing season as EC concentrations entering mid-September. All the values were in the acceptable range, with the more expensive of the three showing lower EC for the plants preparing for dormancy. By monitoring the EC, the grower was able to save 400 dollars per pallet for late spring crops next season. Some examples are shown below of each of the pour throughs. The EC of the well water utilized has been subtracted out of the reading shown.





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