

last about 3 years. This knife is available at <<https://www.hantover.com>> for \$13.65 and is part #45925.

Apex Versus Osmocote: Fertilizer Trial 2007

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We propagate exclusively by cuttings, almost all year long, but I am going to focus on our summer softwood propagation. Our cuttings are usually taken from our container stock. We incorporate controlled release fertilizer (CRF) into the soil mix. The flats are mechanically filled and dibbled, and then two cuttings are stuck into each pot. We can do up to 40,000 per day on two lines. When full, the benches are moved into the Cravo greenhouse.

The pots are watered heavily for 3 days to leach out the initial salts, and then the water is cut back to misting until the plants are rooted. When the roots form, the plant is ready to grow since the fertilizer is already available. After the plants are well rooted, they are moved into the rail yard. This usually takes 3–4 weeks, depending on the variety and ambient conditions. The pots are placed on ground cloth over gravel. Several times through the summer, an automatic pruner runs along the rails to efficiently prune the liners. Most of the crop is overwintered outside; some plants are moved back into the Cravo, others are covered with hoops and plastic.

The Trial. We have always used Osmocote® as the CRF in the propagation mix and it usually works well, but I had some concerns about possible fertilizer dumping in hot weather and the coating breaking, especially as it goes through the flat-filler. Upon discussions with our soil and fertilizer suppliers, we decided to do a trial with what might be a safer alternative, Apex® with Polyon® coating.

The plan was to choose a couple of large crops, and put half into soil with Osmocote, and half with Apex, label them and then record electrical conductivity (EC) values (using a soil salinity meter). The expectation was that after leaching, the EC would stay low for a couple of weeks, but then it would slowly start to rise as the plants began to root. I expected also that the EC in the plants with Apex would rise more slowly, but that the fertilizer would last longer into the fall.

Unfortunately, we encountered a few difficulties along the way. There was a mix-up in the instructions so instead of switching back and forth, Apex was the only CRF mixed into the soil for quite a while, and as a result there weren't many crops of both Apex and Osmocote; most were one or the other. For the crops that did end up with both, often they were two different batches separated by a month or more which made comparison difficult. Also, the labels that indicated Apex fertilizer use were removed in the rails because they were too tall for the pruner. Thankfully Apex is bright green and easily recognized in the soil mix.

Results. Since most of the crops were entirely Apex or Osmocote, there was no possibility to compare the two fertilizers in those crops. There were some crops that had both types of CRF, but they were too far apart in time (e.g., May then July) to do a good comparison. Contrary to expectation, we did not get a significant rise in EC after a few weeks, and there was no difference in EC between the Apex and Osmocote in the

first few months. Also, since this summer was cooler and wetter than usual, the plants were not heat stressed (where the Osmocote would have a disadvantage), so it was not a good year for a trial either. In the end, most crops that had both types of fertilizer showed no difference in either vigor or color.

However, there were two crops that did show a noticeable (visual) difference in fall color and growth in October. They were *Physocarpus opulifolius* 'Coppertina' which showed a significant difference in color and vigor, with the plants in Apex showing better growth; and *Sorbaria sorbifolia* 'Sem' which showed a significant difference in color and growth. In this latter case, the plants in Osmocote fared better. Opposite results which, at this point, I cannot explain.

What have I learned? Firstly, I know better how to conduct a trial. We will try again next year and put better controls on it. I will make sure we choose at least two large crops that will be approximately half of each fertilizer. We will use shorter, color-coded sticks to indicate which fertilizer is in each flat, and I will use a leachate method to test the EC on a smaller number of plants in order to get more accurate readings. In subsequent years, we will need to trial more varieties in order to get a complete picture.

In conclusion, I am still convinced that in some situations it is worth it to use a better quality fertilizer, especially for higher value and difficult to grow crops. I expect to have more proof for this soon.

Because You're a Propagator

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Because you're a propagator...

Because what we might think will always stay the same, probably won't...

Because being a Texas Rangers Fan is "Dog" Tiring...

Because what we expect when we stick cuttings are results like this, and what we often get looks like this...

Because even when we do everything right, we are often rewarded with stands like this...

Because you never know what the next bug is going to be, waiting to ruin your day or eat you for lunch...

I say:

This fall take time to breath, relax, get out and enjoy the wonders of our profession...the plants!

Take time to play with the dog, cause you know you want to!

Get some rest, make time to catch a snowflake on your tongue and...

This spring, may all your stands be strong!