

# SMALL GROWERS

Sentinel initiated two growing methodologies starting in 2021. The first was **SMALL GROWERS**. Normally I would discard back bulbs and divisions of only one or two small growths. I noticed I was getting some very good growth speed on some of the lower benches next to the sliding glass doors by placing these tiny divisions in smallest pots possible and staking them as required. They need more watering because of the smaller pots and I make sure that they get their treatments of microbial HOLGANIX BIO 800 BLOOM and JACKS MORE BLOOM. This fertilizer regimen has a tendency to double growth size and generate new and back bulb growths especially on the second period of new growth. This makes sense since the extra year of growth produces more roots that can better absorb the fertilizers and support the plants. I find the HOLGANIX BLOOM produces better plants in combination with the JACKS rather than higher nitrogen fertilizer.

I lost a few, but the results have justified the effort. As long as there are some good eyes, or even an individual growth, it allows me to gain a near flowering sized established plant in usually two to three years. Many of these divisions are from very limited plants.



Shown is a front section of bench with a combination of **SMALLS**: cattleyas, epidendrums, paphs, developing phrags and small vandaceous. Beyond these are collection seedlings from 2 ½" to 3 ½" pots. Warm growing cymbidiums are to the left.

Here is a picture of **Rlc. Duh's Wisdom 'Green Star' AM/AOS, TRO/TOGA** (*B. digbyana* x Rlc. Golden Regal). I received the plant in July of 2018. It is not a fast grower. I was able to get a small back bulb group in September of 2021. The main plant is flowering in December, 2022. It is a beauty. The SMALL GROWER is in a 3" pot and should be flowering sized in two growths. In this case taking 2 ½ years.

NOTE: FOR REFERENCE TO SCALE, THE LABELS ARE 3 ¾" IN LENGTH.

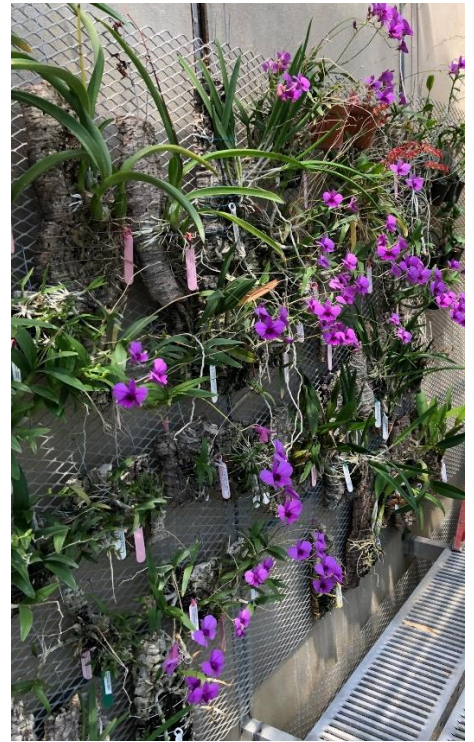


# CORK IT

This now leads me to the second subject of **CORK IT**. In the past I have taken some large cattleyas that were not growing well, stripped them down and cork mounted them. I have previously hesitated to do this as if they grew, it took some careful extraction to get the roots off the cork. But getting the plants back in shape was worth the effort.

I have been very successful doing this, but there is a small downside relating to two conditions. The first is when the plant does not get the message that it is supposed start new roots and growths and basically stalwarts. The second is that it does not generate proper roots and growths. In both cases accept the loss to ORCHID HEAVEN and work with plants that appreciate your efforts.

I was not happy with many of my species and especially nodosa types as they were not the happiest campers in pots. It took me about a year, but I got every brassavola and most species mounted on cork. Most of the mounted plants were placed in the '**BURN ZONE**' south facing wire wall on the second floor. Upstairs there is 50% intermediate shade cloth above and in front of the South wall in addition to 65% shade cloth against the interior of the 8mm double acrylic glazing.



The concept of a second floor was initiated 40 years ago when we often visited south Florida and I made field trips to as many growers as I could. Walking into Ruben Sauleda's hoop houses, the temperatures were over a hundred, but the plants looked O. K. That generated my architectural interests and Sentinel Orchids' two story greenhouse with ridge height of 24 feet was developed that created the famous '**BURN ZONE**'. The height and ridge vents create convection (chimney) currents and combined with two speed exhaust fan and sliding glass doors is the normal ventilation. Watering during the Summer is usually daily and with the two oscillating fans on the second floor with the attached six star spray nozzles that operate during hot weather, keep almost everything happy and at the right color. It becomes a fine tuning question of setting the systems to the right temperatures and timing and reacting to higher temperatures with additional light sprayings and waterings. This system has accelerated the growth on the plants so I am often repotting in 1 ½ years.

There are several hundred mounted plants on the south facing wall that provides ideal growing conditions. The picture in the middle shows a collection of Brassavola nodosas Large cattleyas are potted and placed in galvanized baskets hanging from the elevated handrails on the other side of the double galvanized walkways. The walkways are supported on the bottom chords of aluminum trusses at four feet on center.

I am lucky enough to have Maryland Cork in Elkton, Maryland about 45 minutes from me. I have always been able to go there and purchase cork flats in a bale or select the shapes. When I am there I can usually visualize the sizes, thicknesses, undulations and textures that will best accommodate the plants. One has to be a bit generous with the overall sizes as once the roots start to spread out they take up more room than generally anticipated. One of the first things learned is that some of these species can take two years to really get established on the cork. And they are not that pleased to have their roots disturbed. It is also obvious that it takes two to three flowerings for the full size, number and shape of flowers to develop to maturity and proper show. One of my customers from Texas just had Maryland Cork ship her some slabs and it worked out well.

By December of 2022 the price I paid for cork slabs was \$4.49 per pound. Luckily the cork is relatively light. But you should avoid pieces that are more than an inch in thickness. At that price you are making an investment in CORK IT, especially if you are using larger slabs for several years growth on plants over 12". You can usually break and trim the slabs to get the best shapes.

When mounting you need to visualize what may take place. New growths should have plenty of cork room to move upwards with roots and there should be sufficient room below to accept new root growth moving downwards. Try to avoid roots springing beyond the slab. If they do, spend the time to wet them and remount them on the cork under existing wires or add additional wires.

Listen carefully orchid friends. When you do your mounting and growing correctly the plants will start to grow off the cork. At that time when you have free rooted potential divisions, you can cut and remount. This is common when plants are placed on small pieces of cork. If the cork is good, you can also mount the whole plant on a large piece of cork. Here is where some artistic vision can be useful to get an attractive display. When the cork degrades, it will be necessary to remove the plant. Soak for 15 minutes. Remove as many roots as possible with a sharp knife and strip any free cork. Then quickly rip off what is left. You will be surprised how many roots will release.

As far as watering, in cooler weather, I usually water the hanging wall every three days with sun. In Summer I have misters going several times per day and I can water almost every day if the sun is out. The key is observation as every growing area is different. The plants will tell you when you have it right. New green root tips, plump leaves at the right color, and new growths give you the green flag that you may have it right.

Now this is important. For each season I wet down the wall. I take horticultural limestone powder and throw it on the plants. It's from the 25 pound bags you throw on your lawn. I then lightly water the whole wall. In five minutes wash off the remainder of the limestone. You should see the tips of the roots expanding and greening. This process seems to work for everything, but it is critical for plants that in situ are rooted in, or adjacent to coral and limestone deposits. In fact, some plants like Polyrhiza rely on the treatments to exist. This is why Brassavola, Broughtonia, Epidendrums, Encyclias, Barkeria and many others seem to do well with this regimen.



**Lc. Gran 'Blue Beauty' HCC/AOS.** (Lc. Canhamiana x C. Ariel). Vigorous bifoliate to 18".

There are four new growths emerging from the base of this plant. The upper left and lower left new growths show doubling in size in only one month and the roots are spreading out over the base. There is one previously poorly developed growth center top shown in yellow that started when the plant was potted.



**C. Measurseana 'Waldor' AM/AOS (*C. aclandiae* x *C. walkeriana*).** A very special plant that received 86 points. I was given the unrooted back bulb and decided to cork mount it in August of 2022. The plant did not look particularly hopeful when mounted. The pictures were taken in December of 2022. The species type new roots are spreading out from the bases of two half-grown new growths. The plant rehydrated. Unbelievable amount of growth in 3 months and total resurrection of the plant.



**C. intermedia 'Sentinel's Imperial'**. I repotted the main plant and there was a 4" new growth springing from the back bulbs. It was a logical choice to cork mount it as it would develop two to three times faster than if it was potted. To mount it correctly I anticipated it would need 15" on cork to give it two years of rooting room. VT on the label is the VIRUS TEST NUMBER.



**Brassavola nodosa 'Eloyce's Moonbeam' AM/AOS.** This was a small front division that I mounted on cork in August of 2019. It developed into a full sized well-rooted plant but the roots were going beyond the cork. After soaking the roots for 15 minutes, I took a knife and carefully pried up surface roots and removed most of the cork maintaining the base grouping and free roots. I then remounted the smaller piece of cork and free roots to a 16" piece of cork in December of 2022. I tried to make the addition blend into the larger piece so it looked attractive. With the enlarged cork slab it will be easy to have the plant triple in size. This exercise requires patience not to damage many roots, but it is worth the effort.





**C. Perciviana semi-alba 'Sentinel's Bicolor'**. The plant was purchased from Orchid Trail in 2018.

I divided it and placed the two divisions in 6" plastic spider pots. They grew well and produced quality flowers. Both plants were producing two new growths right next to each other that would be a problem in the future as they would be difficult to impossible to divide properly with a potential of more new growths crossing over each other. I decided to divide them while possible and mount them on cork slabs that would encourage the plants to spread out their new growths.

Here is the process for the second plant. I was able to divide the plant into two divisions. The roots were at a length that I had to work fast to not damage them on the slabs. The cork rafts were approximately 16 to 20 inches in length.

I had removed a plant from the cork slab to the right and wet it down with Clorox front and back for a few minutes and then washed it off. The Clorox brought the surface back to brand new and sterilized it at the same time. Be very vigilant as if there are any root structures left on the cork, they should be tested for virus to insure non-spread or the removed plant needed to be virus free. I placed a thin bed of sphagnum under the plant and wired the plants securely with the 24 gauge plastic coated copper wire. It is important not to place too much moss under the plants to allow the roots to go through wet and dry periods.

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