

Sunset Nursery Tour - May 7, 2015

Contributed by Linda M

Not reviewed by Garden staff

Manager Diane H. met our group of about 25 guides at the entry of Sunset Nursery. She introduced Dave, the head propagator, who was to lead us through the greenhouses. She pointed out we should not linger in the entry area work zone as we lacked the requisite safety vests and steel-toed boots. The amount of covered growing space in the complex is about half an acre or 20,000 square feet comprised of six glass houses and five or six polythene houses.

First greenhouse (glass):

We passed through the office to enter the first greenhouse, the smallest of several, a vista of seedling annuals like celosia, snapdragons, cleome and coleus in flats. Plants are seeded in propagation flats with a manually operated seeding machine. Suitability to machine seeding depends on seed size, shape and coating. An advantage of machine planting is one plant per cell and the labour-saving of a manually operated transplant machine. In addition to flats propagated on site, there are some flats from US sources. They get seeds from England, Chicago, Thompson & Morgan and Stokes. Seeds with 98% germination rates are the desired standard, as poorly germinated flats require more labour to transfer through the growing stages.

In a few weeks City of Vancouver gardeners will be picking up their plants that were ordered in December and January. It is always a scramble meeting growing schedules and deadlines and keeping all the operations running smoothly. With all too familiar budget cutbacks they often feel understaffed. As Dave remarked repeatedly about the work they do here, "It's complicated." He also stated that there are no boring days.

For pests in the greenhouses they use biological controls from Biobest <http://www.biobestgroup.com/>. For example, on the snapdragons there are small boxes of bran with predatory mites for control of thrips, whitefly and spider mites. Another predator for aphids that Dave described as being like the sci-fi film *Alien* is a tiny predatory wasp that drills a circular hole in the body of the aphid to lay an egg which then develops inside the aphid's body until it matures to an adult and emerges to repeat the cycle.

The glass greenhouses date to the 1950s and 1960s. What they lack in modern technology often has to be compensated with manual labour. The overhead vents are operated by cranking a big hanging chain, and the long side vents are opened and closed manually. At this time of year with longer day length this can mean paying for extra evening shifts to do this. Automating the vents would cost about \$65,000, eventually paid for by the labour savings.

Another low-tech solution is a line of clothes pegs above another section, These are used to hold plastic to block sun and control temperature for germination. They try to grow at least 10 of everything. The nursery has five or six full-time staff and adds casual staff for five or six weeks during the busy growing season.

Among its lights, this house has a special \$1500 grow light which covers a 4X4 area and has different spectrums of light. They trialed it with gloxinias and verified that plants grow up to twice as fast. Now basil destined for VanDusen is basking beneath it.

On the way to the second greenhouse we passed the manually operated seed machine, hooked up to a shop vacuum that knocks seeds off a metal plate onto a 432-cell propagation tray (part of the 'Punch-N-Gro' system).

Second greenhouse (glass) – 2 rooms

The Begonia Program in this house uses a couple strategies so the plants don't grow too fast. Opening the side vents first thing in the morning cools the house down to put the brakes on

growth. Fertilizer is reduced to have more nitrate and less phosphorus. Phosphorus creates stretch, and the begonias need to be kept at a shorter height at this stage.

A few years ago a heating upgrade included new boilers and also blowers that distribute heat recovered from the adjacent ice arena to maintain a 20° C temperature. The heating bill went from \$180,000 per year to \$65,000 per year, a savings that would recover the \$750,000 cost of the project in about seven years. A City press release in 2011 gives further details about that energy-saving project: <http://www.ameresco.ca/docs/SunsetNursery.pdf>

Not every plant grown here stays within the City of Vancouver. For example, the City of North Vancouver buys about \$1000 of poinsettias each year.

Dave mentioned the 'Propagation Police'. Propagators, whether commercial, non-profit, or private, need to be attentive to patent rights for plant cultivars, e.g. those of Proven Winners. Inspections by industry growers can be unscheduled. The nursery of North Vancouver District once called Sunset to alert them that they had been visited by the 'Propagation Police.' Labels with PP and PPAF have patent protection and cannot be propagated asexually, e.g. by cuttings. Dave pointed out *Colinus* 'Henna' which is a cultivar with patent protection (until 2028).

A repeated clicking sound could be heard in the greenhouse, which Dave said was the fertilizer injector. Big companies make their own fertilizer mix, but at Sunset they use pre-mixed fertilizers. They get soil from Westcreek Farms that comes with a nutrient charge that lasts a couple weeks.

It is hard to compare the cost of plants here to the cost of buying plants wholesale, but as a cross-check Sunset tries to keep its costs competitive with the District of North Vancouver nursery. Use of biocontrols requires strategies to minimize costs. For example, the mite brans from Biobest are used on slower growing plants like stock. Biobest sends entomologists to monitor the nursery for hotspots. The costs for Biobest products are about \$30,000 a year.

Analyzing problems isn't always simple. For example, a few years ago diseased *Brugmansia* leaves were first analyzed by a local lab, then sent to Victoria and finally went on to a California lab where the pest was identified as a tobacco mosaic virus.

We continued on through a poly house where a gardener, Marlene, has been planting up large hanging baskets at a rate of 15 a day. In the next house, while standing among a sea of flats, Dave told us how as a kid he would seed godetia (*Clarkia*) in pots to have them ready by June and sell them for \$2 a pot.

We wended our way out to the planting machine (PunchNGro) that transfers the small seedlings with rootball intact to larger growing trays. Such annuals as celosia, ageratum, and petunias are handled this way and take about three to four weeks from seed to this stage. The demonstration wowed our audience and merited an encore. <http://www.ballseed.com/growers/punchngro.aspx>

We went by the big cooler that is used in summer for seeds to be germinated for fall. Refrigeration is kept at 5° C for holding seed. In addition to its intrinsic value, seed can be very expensive. A small box could cost \$1000. Dave at one time worked for United Growers on Hwy 99. He commented that the tomato and eggplant seed for planting a few thousand square feet could run into millions of dollars.

We passed through the conservatory house, which sometimes gets whitewashed for light control. Then we returned to the entry area to say good-bye and thank Dave for a very enjoyable and interesting tour that introduced us to the complex operations of Sunset Nursery and expanded our knowledge of Vancouver Parks. Here is a link to a 2013 article in The Province that includes several photos of the nursery.

<http://www.theprovince.com/news/Sunset+Nursery+spreads+beauty+across+city/8476705/story.html>