

Innovative Tips, Tools, and Equipment[®]

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INTRODUCTION

This talk will present ideas, innovations, and equipment in use at Mortellaro's Nursery. The ideas and equipment used are useful for our operation and should be useful for most other operations. Some of the equipment may need modification for use by other nurseries in order to fit within their cultural practices. As with all ideas that were used to create the equipment and methods in use at Mortellaro's, the main purpose of this presentation is to stimulate thought on how our ideas can be applied to other operations.

DRAMM PORTABLE PULSEFOG

This unit was purchased so that we could more easily treat for insect and diseases during the winter when our houses were covered. It allows our spray applicator to treat a single house and move on to the next house in about 5 min. The unit has the ability to treat up to 100,000 ft² in 15 min. For the purpose of safety, we have cut a hole in opposite ends of the house and have a drop down flap. The applicator opens the flap and inserts the fogger through the hole. One-half of the desired chemical is applied and then the applicator goes to the other end of the house and repeats the process. The system is able to distribute the chemical up to 100 ft away, but we prefer to ensure heavy uniform coverage (<<http://www.dramm.com/html/main.isx?sub=106>>).

DRAMM SPRAYER MS20GAS-66

The Dramm sprayer was purchased primarily for portability. We are able to load this onto a cart or in the back of a truck for transport to another location. We use it for sanitation purposes, treating incoming plant shipments and small infestations. It is a four-cycle engine and uses plain gas. The 20-gal tank is perfect for jobs requiring only a few gallons of spray mix. This unit would be very good on paved or concrete surfaces, but on gravel, it needs weight to balance the unit: (<<http://www.dramm.com/html/main.isx?sitesec=8.0.0.0&productRec=3640>>).

VERMEER S600TX

We have been using the Vermeer for about a year now and recently purchased our second unit. The primary purpose of the unit was to load 30 gal and larger material into our trucks for delivery. Once the equipment was on site, we found many other uses for it. It is only able to load 45-gal and smaller material into the back of a truck or trailer due to tipping point weights, but it is very useful in tight spaces when we are busy. It became very useful for spacing large trees in the field since it needs less space to maneuver. We use it to pull and load 30-gal and 45-gal material out of the blocks and place on trailers for transport or loading into customers vehicles. The women that move pallets around prefer to use the Vermeer for the smaller size and complete visibility rather than be belted within a skid steer loader. It comes

in many options, but we chose a narrow track and Kubota diesel engine (http://www2.vermeer.com/vermeer/equipment/mini_skid_steers/s600tx).

VERMEER CHIPPER BC606

In looking for a chipper, our main goal was to not have another engine to maintain. Our first chipper was a Befco, but it was not sufficient for our needs since it only went up to 10 cm (4 in.) diameter. We tried a Vermeer and after less than an hour, we purchased the unit. It handles up to 15 cm (6 in.) diameter trunks and is very easy to service. We mulch all tree limbs and large brush. The ground up wood is used as mulch on our 30-gal and larger containers (http://www2.vermeer.com/vermeer/equipment/brush_chippers/bc600xl).

TREE BOSS

We purchased the Tree Boss and used it for several years. As we switched over to wooden and plastic tree boxes, the Tree Boss became more of a hindrance than a useful tool. We decided to combine the best features of the Tree Boss with a set of forks that worked well on boxes. The most difficult part was designing a way to lock the boxes onto the forks to be tilted. This problem was solved by custom designing a nylon strap with multiple loops for different size boxes. The forks are slid under the box and the strap is placed around the box. A hydraulic ram is then used to push the box against the strap and hold it in place. Using the "Super Forks," we are able to lean trees on trailers as well as the Tree Boss did with pots and B&B (<http://www.treeequip.com/treeboss.html>).

ECHO HEDGE TRIMMER HCA-235

We have tried several brands and styles of hedge trimmers. Of all the brands and styles, we have settled on Echo single side shears. The double side is a nice option, but there are problems with material jamming it up. We have had the most life and least mechanical problems using the Echo brand. Issues with other brands are due more to parts availability and suppliers of new equipment rather than direct quality issues (<http://www.echo-usa.com/product.asp?Model=HC-235&Category=HEDGECLIPPER>).

ECHO POLE HEDGE TRIMMER

This model has a 51-cm (20-in.) single-side hedge trimmer on a 1.3-m (51-in.) pole for reaching across blocks or vertical trimming. The head can pivot and lock into seven different positions to top or angle cut a hedge above your head (<http://www.echo-usa.com/product.asp?Model=SHC-265&Category=HEDGECLIPPER>).

CLUB CARS CARYALL 272

We currently own about 15 Club Cars and have been very pleased with them. They all have aluminum frames, Ingersoll Rand gas engines, and either a flat bed or a bed with sides and a drop tailgate. We use the carts to pull small orders and place the plants on the cart, we pull trailers for larger orders, transport of managers, employees, and customers around the nursery.

The lifespan of the equipment is very good. The engines are only rated for 1,000 h, but with a 100-h maintenance cycle, we have stretched all the engines to 5,000 h

or more. The only repetitive repairs we have seen are brakes adjustments and some repairs about every 1,000 h and also most of the front suspensions at about 2,500 h. These carts have about the same reliability as our Kubota tractors (<<http://www.clubcar.com/commercialbusiness/utility4x2/pages/carryall272.aspx>>).

UPRIGHT SCISSOR LIFT SL30

We purchased the used speed level lift about 6 years ago for the sole purpose of installing plastic on greenhouses. We have found numerous uses for the lift since then. It has been used to repair shade arbors, trim trees for clearance, repair semi trailers, install conduit and lights in buildings, etc. This brand and style had the largest working deck, very stable off road capability, dual fuel capability for indoor use, and was strictly mechanical and hydraulic controlled rather than electronic or computer controlled. Maintenance and repair is similar to a skid steer since the motor controls a hydraulic pump for all motion and lift. Company name has been changed to Snorkle. The type of lift to purchase for off road use is a speed level lift.

BRADY LABEL MAKER

Perfect for outdoor labels on electrical panels, irrigation valves, Emergency signs, and equipment models or ID numbers. We have started making our own bi-lingual signs using the label machine and graphic signs that are only available in English. The machine is available from Grainger (<<http://www.bradyid.com/bradyid/catalog/siteSearchResultsView.do?searchTerms=brady+42001&x=0&y=0>>).

MY TIME FORCE TIMECLOCK

We have three time clocks in use that are polled by modem. All of the time clocks are polled and the data is imported directly into our payroll program. Timeforce is one of the few companies we found that would modify their software to match the parameters of the payroll program in use at no extra charge. Timeforce is the second company we have used in 12 years. When we replaced clocks and software about 3 years ago, we switched from a barcode badge that needed to be swiped to a magnetic badge that is swiped across the front of the clock (<www.mytimeforce.com>).

CARE TREE SPADE

We researched and chose Care Tree for our tree spades. We own two spades and have been more than pleased with the quality. One of our spades developed a broken weld after about 18 months, and the company came down to inspect the spade and replaced the spade in question after verifying it was not an abuse issue. Both spades are mechanically cable controlled with rear stabilizers (<<http://www.care-tree.com/index.php/>>).

MULTI-SEAL TIRE SEALANT

We are using a new tire sealant that is in liquid form until exposed to air as it leaks from a tire. We have been using the off highway sealant for about a year and it works in all tires we have put it in. There are formulations for water-filled tires and also highway use tires. We still use solid-foam-filled tires for our skid steers as a weight ballast issue (<<http://www.multi-seal.com/>>).

BUBCO SPRAYERS

We use the Bubco tractor-mounted sprayers for our pot-in-pot operation. We have been using the equipment for approximately 6 years and have been more than satisfied with the quality of the equipment (<http://www.bubco.com/vineyard.html#tatv>).

SUMMARY

The equipment and ideas that work at one nursery, may not necessarily work at another nursery. Basic equipment will work from nursery to nursery, but highly modified or customized equipment may not. Each nursery has its own unique style of operation and some equipment may not fit that culture. I am not a proponent of changing something that works, but sometimes we have found it best to step back and take a serious look at our operations that we feel could use improvement. Those changes have usually followed an IPPS Conference. Any new equipment or new methods of operation may be useful, if only they can be applied profitably.