

THE NURSERIES OF YESTERYEAR

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I feel very fortunate to have been born in an era of drastic changes in the nursery industry, during an era that transcends from the “dark ages” to a period of practical tissue culture, gene splicing, and computers to sophisticated seedling and cutting propagation. I also feel most fortunate to have been born into a nursery family, a family that has been actively involved in plant production from just prior to the turn of the 20th century, (the year 1897 to be exact).

The California horticulture industry, which includes general ornamentals: shade, fruit, nuts and vines, potted plants, cut flowers, bedding plants, and others, is a billion dollar farm gate value industry. It ranks number 4 or 5 following livestock, dairy, and hay. It is difficult to assess its ranking at the retail level as there are no means of accumulating this data.

Though the industry enjoys its share of “corporate giants” the nursery industry is primarily sole ownership although there are many family enterprises. During the late 1970s, and into the 1990s, names such as Weyerhauser, AMFAC, and American Garden Products flexed their “muscle” into the horticulture industry. Today all have deserted the industry except for Weyerhauser and even they are eagerly seeking a “buyer” for some of their selected facilities.

With air freight and refrigerated trailers, our products are shipped from California and the west coast to the national market place. Flowers and propagative stock finds its way to the international market place. Some products from Florida are sold in the European common market and have grown from zero dollar export to more than 20 million dollars in less than five years.

Florida trails California in the production of horticultural products followed by the state of Texas. National weather conditions have a tremendous impact on California producers. A deep freeze in the southern states can mean feast or famine to California producers. Weather conditions in the great triangle containing a concentrated mass of people (roughly Chicago, Boston, and Richmond, Virginia) during the narrow gardening season can also spell disaster.

During the last decade flower imports from our neighboring countries to the south has greatly impacted our California flower producers. It is difficult to be competitive in an international market place where wages are a dollar a day plus very few fringe

benefits. There is no OSHA and there are no restrictions on pesticide usage or environmental laws and restriction.

A visit to the world's largest flower market in Aalsmeer, Holland, is a shocker. Horticultural products sold are from Denmark, Germany, Israel, South Africa, Australia, Colombia, Mexico, and other countries. One wonders, have the U.S. producers become uncompetitive because of our wage and salary and fringe benefit structures in addition to our many regulations and restriction in labor, pesticide, and environmental laws? With this brief overview, I like to tell you about Oki Nursery and about our industry of yesteryears.

My father, Magoichi Oki was involved in the production of fruit and nut trees, grape vines and citrus in the Fresno, California, area. Fancher Creek Nursery, the forerunner of the California Nursery, and Kirkman Nursery were some of the nurseries where my father had the privilege of learning the "state of the art" in fruit, nut, citrus trees, and vine production.

In 1907, Mr. Oki moved to the Perkins area of Sacramento and began his own nursery, principally in the production of fruit, nut, and citrus trees and grape vines which were in tremendous demand as new orchards and vineyards were sprouting all over northern California. In the 20s, Oki gradually turned to ornamental plant production to satisfy the increasing demands to landscape new homes and housing tracts that were being developed during this era. The depression of the late 20s and the 30s had a tremendous impact on the nursery industry as demand for fruit trees dwindled with the deepening depression. Fortunately, not everyone was a victim of the stock market and there were numerous avid gardeners who ventured to our nursery to purchase nursery stock for landscaping, beautification, home orchards, and color.

I can only recite to you some of my personal experiences as a five-year-old when I became aware that we were in the nursery business and quite different from my numerous truck farming and tree fruit orchard, strawberry, vineyard farming family friends. During summers and when not in school I would travel with my father on his delivery or purchasing of nursery stock for his wholesale and retail trade. Some of the names I recall are Louis Vistica Nursery, Kent Nursery, Miller Nursery, Lindo Nursery, Capital Nursery, Lilly Stribling, Sanger, F.W. Chambers, California, Linwood, Ragath, Bell Conservatory, East Lawn, and Lagomarsino, to name a few.

Sanitation was minimal and consequently plant losses were quite high. Nutrition program, if one can call it that, was mostly organic and, sometimes, commercial fertilizer was used. It was common to mix loam, peat moss, and chicken manure in most of our container mix. Chicken manure was plentiful as there were numerous poultry

and egg ranches in the area north of Sacramento known as Rio Linda. I would venture to guess that B & B or balled and burlap nursery versus container production was 90% B & B, or field production, to 10% container. Most of the container production was limited to camellia, azalea, rose, and other seasonal species that could not survive as a B & B plant heeled in wood shaving bins.

Chicken manure was also used in our field production of general ornamentals and in the production of fruit, shade, nuts, citrus, and grape vines. Commercial fertilizer was also used to enhance the growth of trees and vines. Field Irrigation is one thing that hasn't changed very much over the years. Flood or furrow irrigation was commonplace. Spinner or Ross type sprinklers were used to water B&B plants in wood shaving bins.

One can view plant propagation during this era of the 30s as unbelievable judged by today's standards. Coarse sand in flats were used and cuttings were stuck using Rootone or other hormones. Since mist propagation was still an unknown state of the art, rooting percentages were far from ideal. In order to compensate for these relatively poor rooting percentages, more cuttings were put in to obtain the quantities needed.

As we approached the 40s and the economic arena gradually improved, more ornamentals and shade trees were required to landscape the growing housing market. Many nurseries of northern California purchased lining out stock from Coolidge Rare Plants of Pasadena, California. I can almost picture Ms. Elizabeth Cox (I believe that was her name) in a turtle back coupe with her samples of liners. Orders were placed with her and in 3 to 4 weeks many wood apple or orange boxes arrived at the Railway Express station in Sacramento. Each of the liners were taken out of the pot and carefully packed in moist newspaper cut in strips of 6 to 8 in. These lining out stock were planted in the field for production requiring one or two years. Plants were then graded for size and dug with a ball spade and wrapped with the suitable size burlap and tied with a sisal binder twice. The B&B plants were then heeled in shaving bins for moisture retention for a later shipping date.

It was customary every summer to have two sales persons call on us to take orders for November delivery from Portland, Oregon. Avery Steinmetz, and later, Paul VanAllen of Portland Wholesale Nursery, and Paul Doty made their annual visit. In November several rail cars came to Sacramento with pooled shipments of nursery stock to several Sacramento nurseries. All of the nursery stock were carefully stacked in multiple tiers and carefully packed with moist shingle tow. Looking back it was an amazing feat to unload several box cars of Colorado spruce, Norway spruce, Alberta spruce, Mugho pine, skimmia, pieris, Japanese maple, *Daphne odora*, and a host of other plants from Oregon. Bare-root trees of

Norway maples, hawthorn, mountain ash, red and pin oak are some of those that arrived in these packed box cars. Can you believe a perfect shaped Colorado blue spruce 42 to 48 in. tall retailing somewhere between \$3.50 and \$4.50 in 1939?

One other person that called at the nurseries every summer was Ron Kausen of Cottage Garden from Eureka, California. He and his wife made their annual trek to Sacramento to take orders for rhododendrons. Yes, rhododendrons came B&B, too, in size from 12 to 15 in. to large specimens of 42 to 48 in. size. These, too came in packed box cars from Eureka. Rail freight during this period was the most reliable and economical method of shipping.

I also understand that many pooled box cars of container grown nursery stock were shipped to the Bay Area nurseries from Southern California. If memory serves me correctly the name Pederson and Augsberger comes to mind as the principal plant broker that shipped 1 gal., 3 gal. and 5 gal. ornamental nursery stock to many northern California nurseries.

As the economic condition continued to strengthen there were more demands for general ornamentals and trees. In order to fulfill this growing demand, container-grown ornamentals became more in demand. I can recall using beer can openers to punch the bottom drainage holes in the gallon, 30 lb. frozen food cans, and the square 5 gal cans: 7 gal. and 15 gal. containers were also used for planting specimen trees and shrubs. But the tin can container rusted quickly and something had to be done to preserve the containers. Roofing asphalt was used, thinned with paint thinner, which greatly improved the longevity of the tin can.

With the bombing of Pearl Harbor which plunged America into a world conflict both in Europe and in the Pacific there came a severe shortage of tin can containers and field production again flourished. The subsequent internment of all Japanese Americans from the west coast left a tremendous void in the production of nursery stock and flowers, since people prospered in the war time economy and had money to spend to improve the landscaping of their homes and business places

It was not until March, 1947, that I returned to the postwar Oki Nursery. My parents returned to Sacramento in the fall of 1945, built a house, dug a well and started a nursery again. Fortunately, with our parent's old business ties, business flourished and demand for nursery stock continued to grow. It was during this time a man from Los Angeles, a Frank Higashi, came in to purchase our first crop of fruit, shade, and nut trees. Many truck loads of bare-root nursery stock were taken to Los Angeles and the Allied Nursery Exchange in West Los Angeles. For return hauls 1 gal. can ornamentals were purchased, some at incredibly low prices of

20 cents each. Soon we were making empty runs into Los Angeles to purchase 1 and 3 gal. container ornamentals. We were getting increasing demands for bedding plants and opened up a completely new market.

A semi-truck was purchased in 1949 to haul 1100 flats of bedding plants and thus began a lasting relationship with Union Nursery and Henry Ishida. It was through this relationship that we learned of U.C. Manual 23, the Soil and Plant Laboratory, and O.A. Matkin. This combination revolutionized the nursery industry in the 50s. Continuous feed programs accelerated plant production and products were ready for the marketplace in incredible short production time.

The U.C. System, advocating sanitation, nutrition, soil mix, mechanization, and irrigation did much to launch the nursery industry into the 21st century. During this period Richard Oki designed and had built a mechanical 1 gal. planting machine. I can recall the all time record of more than 21,000 planted containers in one 8 hour day. He also designed a screw type dibble plunger to plant gallons to fives, and the same design is in use today in many planting machines.

In March, 1959, a young man fresh out of the U.S. Army and California State Polytechnic University—Ed Kubo—came to work for Oki Nursery, an association that has weathered more than 31 years. It was during this period we learned about a society in the East called the International Plant Propagators' Society and we were able to attend a meeting in December, 1959, the first of many meetings that we attended in subsequent years in the East. We met many interesting personalities, Drs. Charles Hess, John Mahlstedt, Ken Reisch, Tom Cannon, Marc Cathey and, in the nursery section, Harvey Templeton, Case Van Hoogendorn, Martin Van Hof, and Jim Wells, to name a few. The papers presented a host of new ideas, systems, and for the first time secret barriers began to fall.

In 1961 a Western Region was chartered with their first meeting in Asilomar, California. I can remember many personalities such as Joe Solomone, Jiro Matsuyama, Ted Van Veen, Bill Curtis, Henry Ishida, Drs. Hudson Hartmann, Curtis Alley, Howard Brown, J. Harold Clarke and Steve Fazio, to a name a few. At an early meeting in West Linn, Oregon, I think I was the influencing force to move the meeting from Asilomar to El Rancho Hotel in Sacramento. I believe everyone can recall that the facilities in West Linn and Asilomar in those days was not first class. I was privileged to assist in the programming with Bob Boddy V.P. to stage the Third Western Region meeting. Following this meeting I was sworn in as V.P. of the California Association of Nurserymen at Hobergs and the beginning of my many years of involvement and commitment to the California nursery Industry.

In the spring of 1963 I was pondering how I could develop statistical data of the quantities, cultivars, pricing, and our customers. We attempted to count through invoices generated during a certain week in March, only to find it an impossible task.

In June of that year a young man, Alan Platt appeared at our office, introduced himself representing IBM and said, "I have a system to help you with your invoicing, standardize your accounting system, do payroll, and developing statistical data for later analysis." This system is known as the IBM 403 Unit Record System. The basic system utilizes 3 pieces of equipment, the key punch, sorter and the 403 unit record machine and printer.

The rest is history now but we are proud that we were one of the first to launch the nursery industry into the use of computers. From the 403 Unit Record System we then went through IBM System 3 unit record to disk file storage and to the IBM system 38. When we launched into the IBM system 3 we were talking 16K's of memory where today a 1 megabyte memory can be found in some of the smallest systems. An amazing change in 20 years.

The bedding plant industry is a very important integral segment of the nursery industry. The production practices of the 20s, 30s, and 40s had not changed during this era. Seeds were sown in nurse flats and transplanted singularly and manually. Many of you can recall cutting a dozen plants and placing them in baskets or paper carry-out trays. Most bedding plant producers of this era were family enterprises although there were a few giants in the Los Angeles and Bay areas. Most fertilization was done with blood meal and hoof and horn meal. Many secret formulas for soil mixes were used and were coveted like gold by many producers.

With the advent of University of California Manual 23 and the UC soil system, many coveted soil mixes boiled down to a single mix. Fine sand, peat moss, and light sized aggregates, as pumice or perlite were used. Steam pasturization of the soil placed in flats became a standard practice. Liquid constant-feed became a standard of the industry. It was a common practice to see transplanted seedlings be ready for the market place in a week to ten days.

In 1949 a couple of enterprising young men, the Mertz Brothers, and American Plant Growers, Lomita, California, introduced "pony pak". This novel idea was taking a molded papermache tray roughly $4 \times 7\frac{1}{2}$ in., which held a dozen bedding plants; eight of these trays were placed in a 18x18 in. dimension flat. This simple idea revolutioned the bedding plant industry. In 1950 Oki Nursery entered into contract to be the exclusive Northern California distributor but the venture turned out to be a fiasco because we both failed to recognize weekly seasonal sales and provincialism. We did not recognize that pansies sold in mid-January, peaking in

sale in March, tapered off in demand by May. In addition, public gardeners were not about to change from their old method of cutting out their dozen plants as they always have done. This taught us that more data was required as well as public gardening education.

Aluminum foil paks were next introduced, a giant step forward from the papermache. With the improving technology in vacuum plastic molding the bedding plant industry enjoys an array of plant pak sizes for the sophisticated gardener of today. There has been an increasing trend towards larger plants and we produce a 90 plant 15 pak, a 36 plant 6 pak, and a 16-4 in. pot in a specially designed vacuum molded plastic tray. Gallon can size finished flowering plants, 10 to 12 in. hanging plastic baskets, and decorative clay planting pots have been enjoying an increasing demand.

The bedding plant seeding machine and the "plug" technology, coupled with the rolling bench technology from Holland and Denmark is already changing our bedding plant industry. There are now a handful of nurseries using these technologies and some of these I have seen are not nurseries per se but sophisticated material handlers. Several embryo plant transplanters have been produced, though with many imperfections; it, too, will become history as man with the aide of robotic science will produce this machine. What an exciting era we live in.

There is a metamorphosis occurring in our industry and it is difficult to see and evaluate as the changes have been so subtle and gradual. For instance, there are very few Japanese-American gardeners today as they have gradually retired, giving rise to Hispanic gardeners who were formerly their helpers. We also see larger service maintenance companies to accommodate the large corporate and condominium type complexes.

Many growers and retailers are retiring, having sold their places of business at a very handsome profit as their children fail to accept the challenge of business. The chain and mass marketers have strengthened their position in the retail market place. There are fewer corner or neighborhood nurseries as in yesteryears.

What about the future, well, your guess is as good as mine. But it is perfectly clear its not business as usual, with new environmental rules and regulations, drought conditions, or to just satisfy our ever-increasing population for demands on water, the nurserymen and farmers alike must seek new methods to grow our product in the complexities of our society to provide beauty and the ability to feed and cloth ourselves. There is no room for alarmists, but doing things as we have in the past will not and cannot be permitted if we are to leave our world in a better condition than before we inherited it. The world is greener today

than ever before, think how green is our greater Sacramento-San Joaquin Valley as we have transformed desert and wastelands into productive farms. The planting of trees, lawns, and flowers to beautify and to pursue our American dream continues. We are meeting the challenge, but my only wish is that our state legislatures and national congressmen and regulatory agencies provide us with more opportunities.

America's might and its strength is derived not from its military strength or advance in technology, though very important, but from its ability to clothe and feed its people. From time immemorial, the great dynasties, empires, and kingdoms have become extinct, the Egyptians, Babylon, the Kahn dynasty, the Greek and Roman Empires have all disappeared for failure to recognize this delicate balance of people and nature, together with the abuse of agricultures. Let us hope that our leaders and the American people recognize that our food and clothing does not come from the supermarket and clothing store but from American farms, the basis of our civilization.