

## Horticulture in the Land of the Rising Sun®

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### INTRODUCTION

On 10 Oct. 2010, I departed Auckland Airport for Japan as part of the IPPS Reciprocal exchange. In preparation for this exchange I had spent time speaking with IPPS members in New Zealand who had been to Japan for the IPPS in the past, and I also brushed up on my Japanese language and cultural skills. As part of my exchange I was required to give a presentation at their conference, so I spent some time taking photos of Christchurch and of the nursery operations at Odersings Nurseries.

### HORTICULTURE IN JAPAN

**Arrival into Japan.** Upon arriving in Kansai International Airport, Osaka, I was met by Dr. Nobasa Nito, the IPPS Japanese International Director. It was great to find that Dr. Nito spoke excellent English. Dr. Nito and I caught a super express train for the main station in Osaka, which is about an hour long trip from the airport. Dr. Nito regaled me with stories of his recent trip to the American IPPS International conference, including New Zealand members he had met.

Dr. Nito also spoke about the current state of horticulture in Japan. It was most interesting to learn that in the 1960s 25% of the Japanese population was employed in horticulture or agriculture. In 50 years this has dropped to about 1%. Horticulture and agriculture are now mainly thought of as a weekend job for people who don't make enough during the week and need to earn a little extra to make ends meet. I also found subsequently that growers in Japan seem to all get on well with each other, and have a great deal of mutual respect. After our arrival into the main station (Shin-Osaka Station) Dr. Nito helped me to catch the bullet train (Shinkansen) to travel by myself to Okayama.

**Okayama — Ohuchi Family.** Upon arrival at Okayama Station (about an hour's train trip at speeds up to 285 kph) I was met by Shiginari Ohuchi (Shigie, who attended the 2010 New Zealand IPPS Conference in Blenheim). Shigie and his father Iwe (Johnny) look after the family farm or nursery, which is approximately 20 km from Okayama.

The Ohuchi family nursery is spread over an area of about 10 acres. The family owns several glasshouses scattered through the area, while other glasshouses in the same area are owned by two other growers. To make it easier for visitors to the area, each of the glasshouses has a colour poster with the glasshouse owner's face on it. The family, much like other Japanese growers, has diversified into food crops. I found out that the government offers incentives for farmers to grow food crops, with the country's aim to become more self-sufficient in the future.

The family specialises in *Cymbidium* orchids, and sell 8,000–10,000 orchids each year. *Oncidium* orchids are also grown, however in lesser quantities. The main times for gifting in Japan are midyear (Golden Week) and the Christmas–

New Year period. New Year is a traditional time for people to travel domestically and return to their home towns. The Christmas gifting season is a great time for orchid sales.

The *Cymbidium* orchids are grown during the summer months (May–Oct.) in a mountainous area about 120 km (2 h by truck) north-west from the family nursery. The orchids are grown under shade cloth and are suspended between metal poles for drainage. The orchids are brought back to the family farm for the winter (Oct.–Feb.) as the mountainous area is often buried under snow. The orchids are picked over at the mountain and placed into black plastic trays, five orchids per tray. Each truck that transports the orchids holds approximately 6,000 orchids, with 2 trucks in use for each trip. After all of the orchids have been moved from the mountain site the shade houses are dismantled, so no snow damage can occur. On arrival at the nursery the trays are pushed down a series of aluminium rollers so they can be run off directly into the glasshouse when unloading them from the trucks. There are five women working for the family in the nursery, who each do a lot of impressive heavy lifting of the trays of orchids. The orchids are all sold in flower, and kept separate by type in the nursery.

The Ohuchi family also grow dragon fruit (*Hylocereus* sp.) (Fig. 1) and grapes (*Vitis*). The dragon fruit is pink on the outside with intermittent bits of green foliage that look like scales. The fruit come in three colours of flesh; pink (sweet, round fruit), yellow (sweet, round fruit), and white (not as sweet, oval fruit). Dragon fruit are sold direct from the farm as well as delivered to specialised fruit and vegetable shops, and are priced according to their individual size and weight. The flowers are pollinated by hand, and from that stage it takes about 2 months before the fruit reaches a saleable size. Harvesting is done 3 times a week.

The Okayama area is famous for grapes, particularly sweet Muscat-type grapes. The family grows both red-skinned and white-skinned grapes. Japanese table grapes are large and have thicker skins than table grapes available in New Zealand. Quality standards are exceptionally high in Japan.

My visit to Japan coincided with the traditional time for the rice harvesting. Rice is harvested by a small machine which looked like a snowmobile. I found the Japanese to be incredibly resourceful, with the husks from the rice harvest slowly burnt (Fig. 2), then mixed with an all-round fertiliser (13-13-13) and use it to fertilize on the orchids and grapes.



**Figure 1.** Dragon fruit (*Hylocereus* sp.).

The Ohuchi family have a colour catalogue with examples of wrapped and beautifully presented *Cymbidium* and *Phalaenopsis* orchids and cyclamens (*Cyclamen*). When a client orders cyclamens or *Phalaenopsis* orchids these are brought in from other growers and repackaged to be sent out. These are gifted for many reasons in Japan, frequently on the opening of a new business for luck.

On one of the many outings I was generously taken on by the family we stopped at a mega-centre. They had a large range of conifers, shrubs, bedding plants, bulbs, and gardening accessories. Cyclamen and pansies seemed to dominate the current bedding trend. On another trip we stopped at a garden centre. People seemed happy to pay the extra to shop at the garden centre as a trade-off for the better selection and more specialised plant advice. I also found the Japanese garden centres sell fresh and dried fruit. The garden centre at Soja City had some of the Ohuchi family's dragon fruit on sale. They were available individually or in a presentation box of two, especially for gifting.

**Suzuka — Uchida Family.** I was taken to Suzuka by car, a trip of approximately 5 h. The Uchida family consisted of Mr. Uchida, his wife and four children (one girl and three boys), being a large family by Japanese standards. Their nursery is called Tumugi, which means "Together we are stronger, like the fibres of a rope bound together."

Mr. Uchida, like most people working in horticulture in Japan, works 7 days a week. The second day in Suzuka I went with Mr. Uchida to do a landscape gardening job, which he does in the weekends after spending the weekdays at his nursery.

Our first task back at the family nursery was to prune figs (*Ficus carica*). The nursery included a field with about 400 2-year-old figs planted out in rows of 15. We were pruning them for espalier training. Fruit and all laterals were removed to train the trees into a "Y" shape and the clippings were placed around the base of the tree. The wires for training were to be added the next winter.

Mr. Uchida also grows mondo grass (*Opiopogon japonicus*). We had to fill trays which were approximately 25 cm by 25 cm with 60 mondo grass divisions per



**Figure 2.** Rice husks being slowly burnt before the addition of an all-round fertiliser.



**Figure 3.** Jinenjo, or mountain yam (*Dioscorea* sp.).

tray. These were loaded onto the back of a flat deck truck to be delivered to a transfer depot.

The strawberries grown by Mr. Uchida were planted in mounded soil in tunnel houses. The fruit is sold by the punnet direct from the farm, as well as to outlets. The plants are also sold to other growers, after they have been raised from runners.

Another day I was lucky enough to be taken to a grower's meeting, where I was introduced to Jinenjo, a mountain yam (Fig. 3). Mr. Uchida was trialing seed and germinating this whilst I was there. At the meeting we ground these mountain yams up in a mortar and pestle and made a paste to be eaten raw. It was interesting to see a new vegetable which I haven't experienced before, and to see the size of it, which can get up to 1 m long.

**IPPS Conference – Nagoya.** I travelled to the conference with Mr. Uchida, who is the President of the Japanese IPPS Executive committee. The first day of conference was entirely dedicated to talks, with the first two special talks on genetic modification and creation of a blue rose and the second talk on management of human resources. These talks went for approximately 1 h each. The remainder of the day was filled with 15-min short topics. My presentation was the last for the day, and I showed a PowerPoint on my job in New Zealand and the New Zealand IPPS. I was lucky enough to be translated by Kaneto Aoyama who was to be my next host.

The second day of conference was dedicated to field trips. Both trip options started at the Toyoake Flower Auction which is a Dutch auction that runs on Monday, Wednesday, and Friday. There were upwards of 30 trucks unloading as we arrived, and numerous flowers moving around the auction floor on a train-type system. The groups then split and the other group visited a fig breeding facility. I was lucky enough to be put into the group to visit Hayakawa Engei, Japan's largest cyclamen breeder. The nursery was huge, with all the cyclamen grown under glass. At any time 3.6 million cyclamen are on site. The head grower has trained many nursery-

men about cyclamen and the nursery is considered the ultimate place to learn about cyclamen breeding and cultivation.

After the cyclamen nursery we visited Aoyama's pot factory, Kaneya Co. The company initially began making car parts after World War II before moving into plant pot production. Kaneya has a 30% market share in Japan as well as clients worldwide. Recently Kaneya has diversified into chemicals, plant support systems, and flower buckets for growers to display plants at auction. We saw the steam sterilising system to clean the flower buckets after use so they can be reused, which was surprising since I had encountered limited reuse of products in Japan before this point.

**International Flower Expo – Chiba.** Whilst being generously hosted by Aoyama and his company Kaneya in Chiba (20 min from Tokyo), we visited a Bonsai Museum. There where bonsai shrines and retail shops in the surrounding area. The museum was breathtaking, with many specimens hundreds of years old. The rules of bonsai style and form are incredibly confusing I found. I also discovered that the art form is dying, with the younger generation not interested in learning the complex art and methods of bonsai.

The next day I attended International Flower Expo (IFEX), which is one of the largest horticulture expos in Asia. Aoyama's company had two stands, one for pots and one for a tomato growing system that can be rented. The growing system lifts the tomatoes off the ground and grows them up a frame. Among the numerous other stands were international and Japanese seed companies, media suppliers, and plant breeders displaying their products.

**Acknowledgements.** I was privileged to be chosen to represent both the New Zealand branch of the IPPS in Japan, and also to be an ambassador for New Zealand. I found all my Japanese hosts to be more than generous, kind, accepting, and welcoming. The experiences and friendships I have made stand out for me; I also feel that I learnt and will gain from the horticultural experiences I had whilst in Japan. My enthusiasm and passion for horticulture has grown once again, and I look forward to fully utilising my experiences in the future.

I thank my host families (Ohuchi, Uchida, and Kaneto Aoyama) along with the Japanese branch of the IPPS and the New Zealand branch of the IPPS for this opportunity. I also thank Murray Mannall, Shirley Ogilvy, and Peter Waugh for their help and support. I encourage any young member to actively take part in pursuing the chance to undertake the exchange that I have, and look forward to working with young members of our society to foster new learning and understanding. Since my Japanese experience I have moved to north Queensland, Australia, to take up the position of Production Manager at Anza Nursery in Mareeba.