

TAIWAN SUGAR COMPANY

– NANJING ORCHID NURSERIES:

SUMMER INTERNSHIP

REPORT

Name: Stephie Janna Smith

Student Number: B10022031

Department of Tropical Agriculture and

International Cooperation

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During my two month internship working at the Taiwan Sugar Company – Nanjing Nurseries, I must admit I have learnt more than I thought I would have. I spent most of my time working alongside my assigned mentor – Mr Zhang, supervisor. On my first day, I was given a grand tour of the 24 greenhouse compound and introduced to the ladies who work daily in the greenhouses and workshop. The design of the greenhouse was explained to me. I had to learn how the Cooling system in the green house work to ensure the plants didn't get damaged due to heat stress. All this could be operated my a main switch board found in each greenhouse. Also, to keep the environment suitable for the orchid plants, the overhead screens had to be closely monitored since they were automated and sometimes encountered problems.

During my first week I was stationed at the workshop doing various tasks, which included :

- 1) placing new seedlings in pots
- 2) changing pot sizes



圖表 1 Seedlings in flasks



圖表 2 - One Seedling



圖表 3 - Seedling placed in first pot

As can be seen in the pictures above, the plants are grown in a moss medium. This is a measure to reduce the presence of pests or diseases which are more prevalent in soil. The moss is imported from Chile, one of the few approved moss growers by the International Quarantine body for Horticultural Products. This was the most challenging task for me personally, because there is no exact amount of moss to be used. One must use their own instincts to decide if the plant is comfortable enough in the pot after the moss is added.

During the second week and for the rest of July, I was working side by side with my mentor daily. This involved a lot of walking. Part of the daily errands included ensuring the fans used for cooling the greenhouses (each greenhouse has 6 – 9 fans depending on the design) were running, the nets were open (during sunny weather) and closed (during rainy weather) and the cooling pads had water running. Also, for preparation of

shipments to various international locations, close inspection had to be done when the workers were preparing the plants as each location has different requirements pertaining to how the plants should be prepared for shipment. Japan has the strictest policies in terms of not only importing, but also aesthetics. Though the Nanjing Nurseries is more a production facility, aesthetics - leaf and root condition is very important. Office wise, there was much work to be done. Prior to a shipment, Bureau of Quarantine must be contacted in order to carry out an inspection. Also, when orders are placed, the different varieties requested must be cross checked not only by the branch on what is available on paper, but also must do the same with the varieties in the greenhouses. From the lab seedling stage to flowering takes about two years. Using this timeline and what independent customers want, plants to be selected for sale at various periods during the year is selected.

I was fortunate to have gotten some experience with the shipment preparation both in the greenhouse and cooling room (the room where plants are kept before being shipped off. The temperature is about 20 degrees Celsius in order to dry off the plants as they require a below 11% moisture content. This level of moisture is enough to keep the plant hydrated, while at the same time low enough to not encourage growth of destructive microorganisms).

For Most of August, I worked in a particular greenhouse (number 12) where I helped the worker in charge of that greenhouse. There comes a point just before the pot requires changing the roots begin outgrowing the pot. At this point, they need to be tucked into the pot so they can conform to the mediums shape making pot changing and shipping easier. One bench took roughly one working day (7 hours) to complete. Another errand is to dry the root area by removing the pot and replacing it some time after. About a week or so before shipment the plants are watered. The pots are removed so the moisture can be reduced. When the desired moisture level is achieved, the pots are then re-added. While doing these, pruning must be carried out simultaneously (removing old, wrinkling and yellowing leaves).



圖表 4 - leaves damaged by soft rot

In a situation like that of the above photograph(plants affected by soft rot), two things can be done; If only a portion of the leaf is affected, the portion is cut off and the rest of the plant is left to continue developing. Though the leaf is damaged, it can still be sold to the American market where only the flowers are needed for sale. On the other hand, if the entire leaf is already damaged, the whole plant is confiscated because it is thought the disease has already infected the entire plant system.

Apart from Nursery work, I was allowed to take part in client meet and greets. Whenever international or local clients visited the nurseries, I was invited to sit and have tea with them. Also, I had the chance to participate in three international tours taking place at the Wushulin District Headquarters/nursery. There were visitors from all over the world who were visiting as part of a MOFA (Ministry of Foreign Affairs) Taiwan as part of a Taiwan Culture and Tourism Tour and the Nurseries in Wushulin was a stop on that tour. I was a Tour Guide, had to explain what the company was about, what is it this branch does and about the business and orchids in general. It was a very fun experience as I got to meet many people, even from my own country.

As the saying goes, “all work and no play makes Jack a dull boy. One of my fondest memory is of the staff trip to Alishan Mountain park in Chaiyi. I had always wanted to visit there, but hadn’t had the opportunity

yet. We climbed “Da Dong Shan” (English – Big Freeze Mountain). I really had a good time. The view at the top was amazing. There was fog all over. The moment was almost surreal.



圖表 5 My "pretend" mother and I at the top of Da Dong Shan



圖表 6 My Co-Workers who made it to the top (some quit along the way and waited halfway)

Overall I would say this was an amazing experience. I learnt a lot of valuable information which can not only be applied academically but also if I decide in the future to start off a business on my own. I am heartily grateful for the opportunity I had this past summer.