Orchid Industry of Singapore

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Singapore is one of the leading countries in orchid cut-flower export. Considering the size of the country, it has done remarkably well. This achievement is supported by local interest in orchid hybridization producing new hybrids, in the strategic location as a center of air transport, and in the efforts of growers and exporters. Although the pressure on land use has reduced the acreage of orchid farms in recent years, the future prospects of this export cut-flower trade are still good.

La Industria de Orquidias en Singapur. Singapur es uno de los países más avanzados en la exportación de orquídeas cortadas. Considerando su poco espacio, Singapur ha avanzado mucho. Este avance está soportado por interés local en la hibridación de orquídeas en lugares estratégicos como centros de transporte aérea y por el trabajo de los agricultores y exportadores. Aunque las fincas para la agricultura de orquídeas han reducido, debido a poco espacio en el territorio de Singapur en estos últimos años, el futuro del comercio de estas orquídeas cortadas está muy bueno.

Singapore is one of the orchid cultivation and hybridization centers of the world. The fine quality of Singapore orchid hybrids was first impressed on the orchid circle, as well as flower lovers, in 1954 when Vanda ‘Tan Chay Yan’ received the highest judging award of a First Class Certificate at the Chelsea Flower Show in England. The orchid cut-flower export trade also increased steadily from a humble beginning in 1955 of less than US$5000 annually to a multi-million dollar concern today.

The interest in and admiration for orchids in Asian cultures and the European fascination with the rare and exotic are the two prime, historical sources of motivation on which the growing and exporting of orchids as a modern industry in Southeast Asia are based.

In the Chinese classical texts compiled by Confucius (ca. 551–479 B.C.), there are indications of the high regard in which orchids were held due to their fragrance, charm, elegance, and survival capacities in relatively harsh environmental conditions. Thus recognized as having important characteristics, they came to symbolize virtuous human qualities. Two species of Cymbidium, C. viridescens and C. ensifolium, were probably the first orchids to be domesticated and consequently became the models used in both Chinese painting and literature (Teoh 1982).

The spread of Chinese culture to Japan furthered the admiration of orchids; the Chinese word for orchids in general, lan, became ran in Japanese. To the many admired Chinese orchids were added some native to Japan, such as Neo-finetia falcata (Teoh 1982).

Europe's interest in orchids was stimulated by the desire of the aristocratic and rich to possess some tangible object representative of the exotic and heretofore little known or even unknown lands gradually being explored by intrepid natu-
ralists, explorers and adventurers patronized by Europe’s nobility. For example, it has been recorded that “the Duke of Devonshire paid 100 guineas to Messrs Rollison in 1860 for a single specimen” of a species of *Phalaenopsis* (Leigh 1982). At that time, 100 guineas was such a large amount of money that it is no wonder that the search for exotic new species was much encouraged.

While orchids used to be an expensive hobby, the availability of desired hybrids through mass propagation, the advent of relatively low-cost jet transport, and the increase in purchasing power of the consumers in industrialized countries contributed significantly to the development of the orchid cut-flower export trade.

**HISTORICAL PERSPECTIVES IN THE MALAY PENINSULA**

Through the interest of the British East India Company in establishing trading posts at Penang in present day Malaysia in 1796, and Singapore in 1819, and later in Malacca, the already established Calcutta Botanical Garden instituted research in the Malayan flora. It soon became apparent that Orchidaceae are liberally represented in tropical floras; that of Malaya attracted much interest from free-lance and professional collectors. By 1859 the Singapore Botanic Garden was established by a private Agri-horticultural Society but with official assistance (Burkill 1978). In 1875, it became a department of the government and its records from that time indicate that orchids were being cultivated. Even then, the Garden’s plant exchange records show a very active program of shipments sent and received of many species of orchids. Local interest in Singapore in orchids must have been high because the Garden’s director reported in 1879 the need for greater security with regard to those being cultivated (Burkill 1978). In 1888 the third Superintendent of the Garden and first Director of Botanical Training, H. N. Ridley, brought with him a considerable background and interest in orchids, having published 16 papers on orchids before taking up his position. He continued the program of orchid collection, cultivation, and exchange so that by 1912, a catalogue of plants in cultivation at the Garden listed 276 species of orchids, the largest group of established plants in any one family. Under the next Director, I. H. Burkill, appointed in 1912, the work with orchids was both continued and furthered. By this time, it was clear that many introduced plants of horticultural interest and those from the local flora were not ever-flowering in the Malayan and particularly the Singaporean climates with their slight seasonal changes during the year. The orchids, both indigenous and exotic, were no exception, excluding perhaps one remarkable hybrid of *Vanda*, *V. ‘Miss Joaquim’*. Periodicity and shyness of flowering were hurdles to be overcome, possibly by paying close attention to the requirements of cultivation, that is, duplicating as closely as possible what was known of the native environmental conditions, but perhaps more practically by making crosses among the many species now available in the Garden’s collection and also those in private collections. In 1922, the next Director of the Singapore Botanic Garden, R. E. Holttum, was appointed. At that time Knudson developed a non-symbiotic method of germinating orchid seeds, which are exceedingly small, with no endosperm, cotyledon, or other reserves. This culture method was introduced to Singapore by Hans Burgeff in 1928 when, on his way back to Europe from Java, he visited Holttum (Burkill 1978). Holttum started the culture of orchid seeds in 1928 and reported that “The Director succeeded in