



Plant Bulletin



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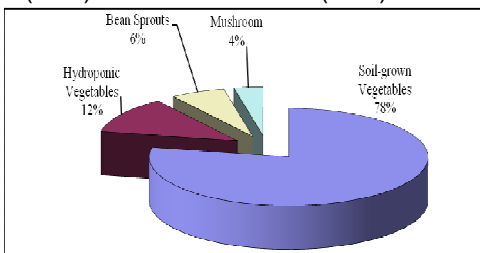
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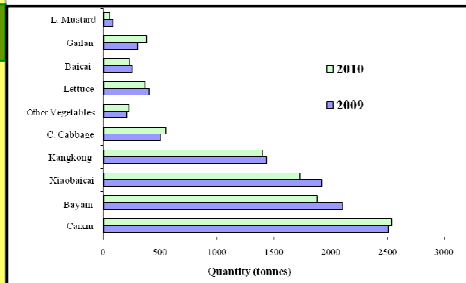
Local Production of Vegetables in 2010

In 2010, Singapore had licensed 53 farms for vegetable cultivation. These occupied a total area of 101.152 ha, the majority of which was used in the production of soil-grown vegetables (78 %). The remaining land was used in the production of hydroponic vegetables (12 %), bean sprouts (6 %) and mushrooms (4 %).



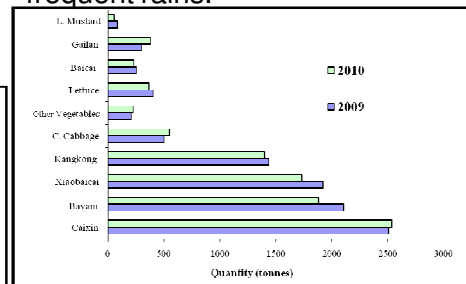
Percentage of land area used for vegetable production in 2010

In total, 19,491 tonnes of vegetables and food crops, with a value of \$23.58 million, were produced in 2010. These were mainly bean sprouts (50 %; 9,822 tonnes) and leafy vegetables (48 %; 9,347 tonnes). Caixin, bayam, xiaobaicai, and kangkong accounted for 81% of the leafy vegetables produced in the year 2010, and was similar to 2009's production levels.



A comparison of the types and quantities of leafy vegetables produced in 2009 and 2010

The ex-farm prices of leafy vegetables were also generally higher in 2010 than in 2009. In particular, the prices of caixin, xiaobaicai and bayam had increased by 34%, 32% and 25% respectively. A possible explanation for this is the reduction of leafy vegetable supply from Malaysia as a result of more frequent rains.



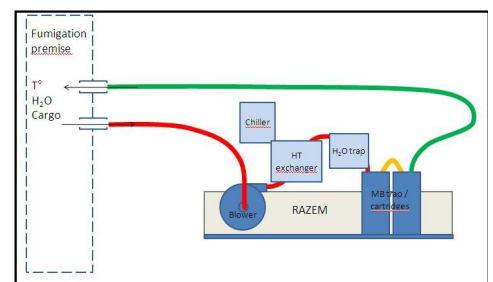
A comparison of the average ex-farm prices of leafy vegetables in 2009 and 2010

The Recapture & Recycle of Methyl Bromide

Methyl bromide (MB) is a highly effective fumigant for soil fumigation, and post harvest disinfection of insects, rodents, weeds and pathogens in a wide range of crops and wood products. However, this highly toxic ozone-depleting substance will be phased out from 2005 under the

the Montreal Protocol.

Several systems of recapture and recycled use aims at minimizing this problem. One such system is the mobile Belgium RAZEM[®] (Recovering And Zero Emission Modular) system.



Flow diagram of the Recovering And Zero Emission Modular (RAZEM)[®] system

The RAZEM[®] system comprises of an interface that connects a feeder from the system to the container or premises. Using an oil free blower, a chiller and heat exchanger and a water trap, the feeder feeds the gas mixture into a cartridge containing activated carbon filters. The filtered gas mixture is then returned into the container / premises. Several cycles through the RAZEM[®] system will result in almost complete absorption of methyl bromide onto the activated carbon. This recaptured methyl bromide can then be re-used for fumigation.

The RAZEM[®] system can therefore reduce methyl bromide emissions into the atmosphere during methyl bromide fumigations. Furthermore, it has the potential for applications in many areas besides methyl bromide fumigation.

The 20th World Orchid Conference

The triennial World Orchid Conference (WOC) is hosted and organized by selected local, regional or national orchid societies. Singapore won the 20th WOC bid, and with the theme “Where New and Old World Orchids Meet”, the 2011 WOC was held on the 13th-20th November at the Marina Bay Sands Convention Center.



Mr Tay Jwee Boon's (Orchids and Ornamental Plants Section, AVA) inspiration for AVA's exhibit was the dream within a dream concept from the movie “Inception”. Component displays integrated into the overall theme of “old meets new”, and with pathways leading among them for more intimate views. AVA's 100 m² showcase, utilized specially designed displays to track the evolution of the orchid, from its origins in the rain forests of the world, to their cultivation by hobbyists, subsequent hybridization, and eventual commercialization and global trade as cut-flowers. Also highlighted through associated murals and exhibits were Primary Production Department / AVA's continuing contributions the local orchid industry through the provi-

sion of phytosanitary and CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna) services, plant health advisory services, and the facilitation of technological solutions for the commercial export packing of cut-flowers. Vertical orchid production was also featured for its potential for enhancing orchid productivity.

AVA had also arranged with the Immigration and Checkpoint Authority for the rapid clearance of orchids brought into Singapore for exhibit or sale at the WOC. A post-entry inspection site was set up near the WOC venue to facilitate the inspection of such plants. Overseas visitors wishing to bring orchids home could also get the required phytosanitary certificates and CITES permits from AVA's Market Place booth.



At the Show, AVA won 58 awards (4 trophies; 17 medals [2 Golds, 9 Silvers and 6 Bronzes] and 37 ribbons [17 Blues {1st place}, 14 Reds {2nd place} and 6 Whites {3rd place}], including the 100 m² category's Best Educational Display and the Joyce Steward for the Best Poster with Blue and Red Ribbons. The 20th WOC committee chairman also awarded AVA a medal of appreciation for its participation and contributions.

The Orchid Business Cluster

With AVA's help, the Orchid Business Cluster set up a 30 m² display at the 2011 WOC showcasing the quality and assorted colours of Singapore's commercial cut-flowers. It won a Gold medal and a Blue ribbon.



ASEAN Plant Quarantine Training Program

The ASEAN plant quarantine training program was organised by the National Plant Quarantine Service at Anyang, Republic of Korea, on 17th-27th May, 2011. The training included lectures on Korea's plant quarantine system, inspection procedures for imported plants, pest risk analysis for the importation of prohibited items, laboratory inspections for insects and pathogens, phytosanitary treatments, and electronic phytosanitary certification system. In addition, a field trip was organised to their Jungbu regional office, where the participants were shown the inspection of plants in bonded warehouse, and inspection of fruits at the trader's premises within the free trade zone. A mini-workshop was also conducted on the methods for fungi identification and seed testing, and on the types of common fungal diseases.

Plant Bulletin is published biannually by the **Horticulture Working Group, Agri-Food and Veterinary Authority**, Animal and Plant Health Centre, 6 Perahu Road, Singapore 718827.

The aim of this bulletin is to disseminate horticulture and plant health information to plant growers, exporters and importers in Singapore. If you have any suggestions, comments or enquiries, please contact us at :

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