

Current Situation of Fruit Industry in Taiwan

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Abstract

The geographic location makes Taiwan a perfect island for growing fruits from tropical, subtropical to temperate. There are more than 30 kinds of fruits, with an area of 220 thousand hectares, total production of 2.7 million tons and production value of about NT\$ 100 billion dollars. The production value of tropical fruits comprises about half of the total production value. Mangos, bananas, pineapples, wax apples, guavas and papayas are the leading tropical fruit species. The present article introduces the current situation of tropical fruit production in Taiwan.

Key words: Tropical Fruit, Production, Taiwan

BANANA

'Pei-Chiao', 'Tai-Chiao No. 1', 'Tai-Chiao No. 2', 'Tai-Chiao No. 3', and 'Formosana' are the major cultivars. The area, total production and production value for bananas in Taiwan were 10,184 hectares, 189,900 metric tons and NT\$3 billion dollars, respectively, in the year 2004. Major production areas are central and southern Taiwan, where southern Taiwan produces spring and summer bananas and central Taiwan fall and winter crops. About 10 % of the production is exported, mainly to Japan.

GUAVA

The size and quality of guava has been greatly improved in these years. 'Century' and 'Pearl' and 'Crystal' are the major cultivars. The area, total production and production value for guavas in Taiwan were 7,486 hectares, 184,738 metric tons and NT\$2.1 billion dollars, respectively, in the year 2004. Production concentrated in southern and central Taiwan with Kaohsiung county 38 % the largest, Tainan county 18 % and Junghwa county 18 % both the second largest. Fruits can be

harvest all year round, but fruits with better quality are produced from September to February. There are about 1 % of the total production was exported to Canada, China, and Hong Kong.

INDIAN JUJUBE

The quality and size of Indian jujube has been improved a lot in recent years. The fruit of some cultivars has sizes comparable to small apples. 'Honey' is the leading cultivar. The area, total production and production value for Indian jujubes in Taiwan were 2,083 hectares, 22,916 metric tons and NT\$0.8 billion dollars, respectively, in the year 2004. Production concentrated in Kaohsiung and Pingtung counties.

MANGO

The area, total production and production value for bananas in Taiwan were 19,142 hectares, 182,196 metric tons and NT\$6 billion dollars, respectively, in the year 2004. The yield of a single mango tree is average at about 27 kilograms.

Both polyembryonic and monoembryonic mango (*Mangifera indica*) varieties are commercially grown in Taiwan. 'Tsar-swain' and 'Irwin' are the two leading ones comprising about 80 % of the total production area. The fruit characteristics of some of the mango varieties grown in Taiwan are listed in Table 1.

Table 1. Fruit characteristics of some of the mango varieties grown in Taiwan

Variety	Fruit Weight (g)	Fruit Length (cm)	Fruit Width (cm)	Total soluble solids concentration	Acidity (citric acid, %)	TSSC /acidity	% Flesh weight ^z (g)
'Haden'	444 c ^y	107 b	93 ab	18 ab	1.3 b	14	0.93
'Irwin'	386 c	124 ab	88 ab	11 d	1.5 b	7	0.92
'Jin-hwung'	965 a	144 ab	99 a	15 bcd	2.3 ab	6	0.94
'Kent'	506 c	113 ab	95 ab	15 bcd	1.0 b	15	0.92
'Tainong No. 1'	237 c	99 b	69 c	20 a	4.0 a	5	0.85
'Tsar-swain'	154 d	100 b	64 c	17 abc	2.2 ab	8	0.84
'Yulin'	567 bc	117 ab	98 ab	13 cd	0.5 b	26	0.93
'YuWen No. 6'	659 ab	182 a	98 ab	12 d	1.2 b	10	0.93

^zpercentage of flesh weight/fruit weight.

^ymean separation within columns by Duncan's multiple range test, $p \geq 0.05$.

PAPAYA

'Tainong No. 2' is the major cultivar. To keep away from aphid transmission of papaya ringspot virus, production under net houses is the major cultivation system. The area, total production and production value for papayas in Taiwan were 2,961 hectares, 133,620 metric tons and NT\$1.5 billion dollars, respectively, in the year 2004. Production concentrated in southern Taiwan. Genetically modified papayas are not yet approved for commercial production.

PINEAPPLE

The production pattern has changed from processing-oriented to primarily fresh consumption. In recent years, many fresh consumption cultivars were released, such as 'Tainong No. 13', 'Tainong No. 16', 'Tainong No. 17', 'Tainong No. 18', 'Tainong No. 19'. The area, total production and production value for pineapples in Taiwan were 12,068 hectares, 458,4990 metric tons and NT\$8 billion dollars, respectively, in the year 2004. Production concentrated in southern Taiwan. About 70 % of the fruits are produced from April to September, the rest of the fruits are harvested from October to March next year. Only about 0.2 % of the total production was exported to Canada, China, Japan, Hong Kong and Korea.

SUGAR APPLE

The area, total production and production value for sugar apples in Taiwan were 5,931 hectares, 89,189 metric tons and NT\$2.8 billion dollars, respectively, in the year 2004. Production concentrated in Taidong and Tainan counties.

STAR FRUIT

The area, total production and production value for star fruits in Taiwan were 1,642 hectares, 26,516 metric tons and NT\$0.5 billion dollars, respectively, in the year 2004.

WAX APPLE

The area, total production and production value for the wax apple industry in Taiwan were 7,302 hectares, 84,991 metric tons and NT\$6 billion dollars, respectively, in the year 2005. 'Pink' is the leading cultivar, representing 95% of the planted areas in Taiwan. Flowers appear in March in south Taiwan and fruits ripen in May under natural condition. However, 'Pink' blooms and sets fruit almost year-round after flower forcing. As a result, fruits at different growing stages could be found in different orchards, different trees and even on the same tree. Despite its name, this

cultivar produces fruits varying from pink to deep red, depending on environmental and cultural conditions. Best prices are obtained with deep red fruits. Fruit color is influenced by many factors, such as light, temperature, position on the tree, growing stage, and leaf:fruit ratio. There are 5 production systems for the wax apple industry in Taiwan, those are regular, simple flower forcing, improved flower forcing, bald cut, bald cut plus shading.

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