



Wakayama Mikan

**Warm Climate Brings
Rich Flavor**

**The Story of
Wakayama
Premium Foods**

Local People and Climate
Vol.2

Wakayama – Great Producing Area of Mikan

Mikan (*Citrus unshiu* Marc.) is one of the fruits very familiar to Japanese people. The typical image of a cold winter day usually makes them nostalgic that family members spend their time eating mikan at a kotatsu, a Japanese table with a heating device.

Located in the Kii Peninsula, the southernmost area of Honshu Island, Wakayama Prefecture is blessed with warm climate even in winter. It has a 648-kilometer coastline and rich forest which covers 77 % of the prefectural area. Therefore, its geographic characteristic is that the mountainous areas often extend near to the coastline and there are few flat areas. It is this particular condition that is suitable for producing mikan which prefers the sunny and warm climate.

The Arida region is the main producing area of mikan in Wakayama, located in the central part of the prefecture. In the middle of the region, the Arida River system, originated in Mt. Koya, flows westward to the Kii Channel. Mikan groves cover almost all the mountains along the river and the coastline.

From mikan groves near the top of the mountain, people can overlook innumerable mikan trees shining brightly in the sunlight that pours to the steep slopes and reflects on the surface of the Pacific Ocean or the Arida River.



Industrious and Careful Works

–Seeking for More Delicious Mikan

Most of sloping mikan groves are terraced by stone walls. When the ancestors tried to cultivate the slope of mountains to produce mikan, they created these terraced fields as the land was too steep to plant mikan trees. They are said to have made stone walls by bringing stones all the way from other areas along the river basin. The stone walls, built on their enormous efforts, have irreplaceable role to produce delicious mikan by preventing landslides, keeping the heat and reflecting the sunlight.

In general, thinning out of superfluous fruit is an important practice in order to grow large and tasty fruits. The management of the trees, such as pruning and thinning, is especially important because mikan shows strong tendency for biennial bearing which its yield increases (on-year) and decreases (off-year) every other year. This change is said to be caused by many factors such as drought during summer. This phenomenon can be mainly caused by lack of nutrients in the tree to form enough flower buds next year, following excessive use of them due to over-cropping.

In order to produce delicious mikan stably, farmers repeatedly thin out of superfluous fruits so that one fruit remains in proportion to approximately 25 leaves. Even though these works are very laborious in narrow and steeply sloping groves, all the farmers dedicate themselves to growing mikan very carefully.

Furthermore, water management is a critical factor in the taste of mikan fruits. From spring to early summer (the end of the rainy season), abundant water is applied to mikan trees because water shortages during these period cause the fruit and/or leaf drop.

Afterwards, farmers refrain from watering so that the fruits have higher sugar content under proper drought stress. Watering is started again from the end of August to the middle of September to make fruits larger and reduce acidity, and mikan is stressed with proper drought again from the middle of September to the harvesting season in order to make the sugar content higher. These elaborate works contribute to nice fruit color and sweet taste. Beneath the Nagamine Mountainous area on the right bank of the Arida River, there is widespread Chichibu Paleozoic group, the most ancient geologic stratum in Japan, which contains the adequate amount of gravels. Along with careful water management, this soil exhibits high water retention ability as well as favorable drainage properties and air permeability, producing the special mikan fruits with well-balanced combination of sweetness and acidity.



Encouraged by Yorinobu Tokugawa, the first feudal lord of the Kishu Domain (former name of Wakayama), the large mikan production was begun. Mikan is said to have been introduced from Yatsushiro, Kyushu Island, as a crop growing even in Kishu Arida (present Arida County), where only small amount of rice could be harvested owing to its few flat farmlands. In 1634, after mikan production grew to be the major industry in Wakayama, these fruits were shipped to Edo (former name of Tokyo) by sea. Then, Wakayama mikan soon gained a growing reputation in Edo, and the name of

Kishu Mikan got well-known. Mikan in those days was called Kishu Mikan, small-sized fruit with seeds in each segment. The life of Kinokuniya Bunzaemon, a great merchant who made a sizable fortune by shipping mikan to Edo by sea in stormy weather, attracted many people

through novels and kabuki plays. After Meiji period (1868-1912), Unshu Mikan took place of Kishu Mikan because they are larger, sweeter, and seedless. The varieties of mikan in Wakayama have changed as time goes by, and a plenty of them are produced now.



Special History of Wakayama Mikan

–Getting Popular in Edo (present Tokyo)



Wakayama Citrus – Not Only Unshu Mikan!



Wakayama is the largest producer of Unshu Mikan in Japan, and the yields of many types of citrus such as ‘Hassaku’, ‘Kiyomi’, ‘Shiranuhi’, ‘Sanbokan’, ‘Seminole’ and others are also high. These are called ‘Chubankan’ (mid-and late-maturing citrus) as a whole.

The harvesting season varies in different varieties: ‘Hassaku’; mid-January to late-April, ‘Kiyomi’ and ‘Shiranuhi’; February to April, ‘Sanbokan’; March to mid-May. Unshu Mikan grown in greenhouses also starts to be sold around May, and various types of citrus are harvested all year around. Wakayama is exactly “The Kingdom of Citrus Fruits”.

Many kinds of processed food from these citrus are made in Wakayama. Above all, 100 % pure Unshu Mikan juice is quite popular. Each producer is proud of the method to produce juice. Even though the materials (Mikan) are grown in Wakayama, the different ways of squeezing mikan make smooth or thick juice, contributing to the various tastes and characteristics. Unlike concentrated juice often seen in supermarkets, the pure mikan juice has a surprisingly rich flavor and the taste of fresh mikan itself.

A wide varieties of mikan jam and peel products are also available in Wakayama. The climate, geographical condition, special cultivation and many other factors of Wakayama make its mikan well-balanced between sweetness and acidity. Both fresh and processed ones are delicious.



Everyone loves Japanese mikan!

Mikan contains abundant vitamin C. Only two medium-sized mikan fruits make it possible to take approximately half of the recommended daily amount of intake (100mg/ for adult). It also contains many nutrients such as β -cryptoxanthin which is expected to have effect on the prevention of arteriosclerosis and osteoporosis. Furthermore, dried mikan peels (sometimes called “Chimpi”) are so nutritious that they are used as the essential material of Chinese medicine.

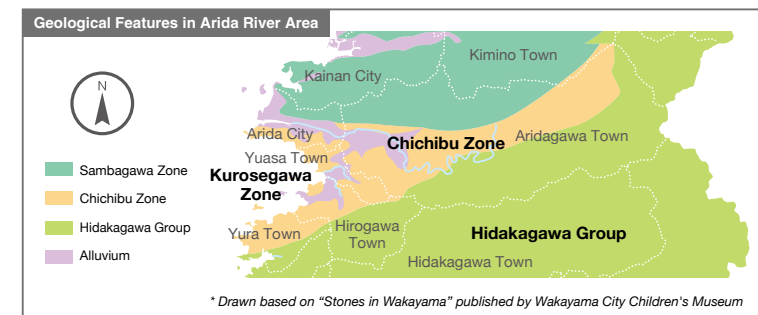
To distinguish very delicious mikan by appearance, the following characteristics are helpful; the peel is deep-orange colored, thin and tight, and densely covered with oil glands, round spots on the surface of the peel, which aroma and oil components are confined. Their cut end of the stem is narrow which sometimes looks like their calyx.

Mikan farmers in Wakayama usually eat mikan after peeling in the way called “Wakayama peeling”. They divide one fruit into four segments from the bottom and peel them. It is important to peel from the top of the fruit. In this way, “albedo”, white threads on the surface, can be removed very easily. “Wakayama Peeling” is the special way to peel which farmers can eat mikan quickly without scattering peels.

Even if you do not have kotatsu, why not spend your special winter with your family or friends, surrounded by mikan?

Climatic Characteristics and Soil Property in Arida River Area

Located between the Setouchi and Nankai Climatic Region where Kuroshio Current affects, the area is relatively warm and rarely damaged by cold weather. Beneath the Nagamine Mountainous Area, on the right bank of the Arida River, there is widespread Chichibu Paleozoic group, the most ancient geologic stratum in Japan, which contains the adequate amount of gravels in clay. Therefore the soil has high water retention function as well as favorable draining properties and air permeability. Itoga District where mikan production started in the Arida region is also located on this Paleozoic group





The Main Production Areas
in Wakayama Prefecture

Calendar of Operations for Mikan Cultivation

January	February	March	April	May	June	July	August	September	October	November	December
Harvesting Chubankan	Pruning and Training					Thinning fruitlets (Former)	Thinning fruitlets (Latter)		Harvesting (Very early ripening → Early ripening → Normally ripening)		

[For More Information on Foods of Wakayama Prefecture...](#)

[To inquire about foods of Wakayama...](#)

Wakayama Specialties Online Catalog

<http://www.pref.wakayama.lg.jp/prefg/071700/database/dbtop.html>

Wakayama Intermediate Product Catalog

<http://www.pref.wakayama.lg.jp/prefg/071700/proc/index.html>

<Wakayama Specialty Shop in Tokyo>

Wakayama Kishikan <http://www.kishukan.com>

<Online Shopping>

Furusato Wakayama Waiwai Ichiba (Yahoo shopping)

<http://store.shopping.yahoo.co.jp/waiwai071700>

Wakayama Prefecture

Agriculture, Forestry and Fisheries Department
Food Promotion Division

<http://www.pref.wakayama.lg.jp/prefg/071700/index.html>