



Calendar of Operations for Persimmon Cultivation

January	February	March	April	May	June	July	August	September	October	November	December
Pruning		Thinning buds			Thinning fruitlets		Harvesting (Nakataniwase→Tonewase→Hiratanenashi→Fuyu)				

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

<Wakayama Specialty Shop in Tokyo>  
 Wakayama Kishukan <http://www.kishukan.com/>

<Online Shopping>  
 Furusato Wakayama Waiwai Ichiba (Yahoo shopping)  
<http://store.shopping.yahoo.co.jp/waiwai071700>

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Wakayama Prefecture  
 Agriculture, Forestry and Fisheries Department  
 Food Promotion Division  
<http://www.pref.wakayama.lg.jp/prefg/071700/index.html>

# Wakayama Persimmons.

Autumn's Greatest,  
Natural Treasure

The Story of  
Wakayama  
Premium Foods

Local People and Climate  
Vol. 1

# Nurturing Japan's No.1 persimmons

## ~Climate and Soil

Persimmons, growing ripe in the garden. This is an autumnal scene in which you can sense Japanese nostalgia that has become rare recently. Japan's top persimmon producing areas lie in hills located on both banks of the Kinokawa river which flows in the northern part of Wakayama Prefecture, where you can see the landscape colored by persimmons in autumn.

The Ito region, in Wakayama Prefecture is suitable for the cultivation of persimmons, enabled by its belt-shaped, rich soil and the balance of water retention and drainage. Mt. Koya which is registered as a UNESCO World Heritage Site, is a cold place where it snows a lot in winter despite Wakayama being a warm area as a whole. It is said that Sanada Masayuki and Yukimura, famous samurai warlords in the medieval period who were deported to the mountain after a defeat at the Battle of Sekigahara, went down to Kudoyama Town to escape from its coldness.

The cold air that comes from Mt. Koya meets the updraft generated by the water flow of the Kinokawa River which runs to the northwest through the Kii Mountain Range. Then, the temperature difference between daytime and nighttime rises to no less than 10 degrees Celsius from summer to autumn when the persimmons start to ripen. As the temperature difference between daytime and nighttime has a strong impact on maturity, the Ito region is definitely the best place for their cultivation.

The Ito region is also relatively warmer than other producing areas, with the temperature rising to around 30 degree Celsius during the daytime of the growing period. Moreover, the color of the persimmons turns into a beautiful orange and they become magnificently large and sweet thanks to the rich sunlight in the fields located on the slopes of the hills.

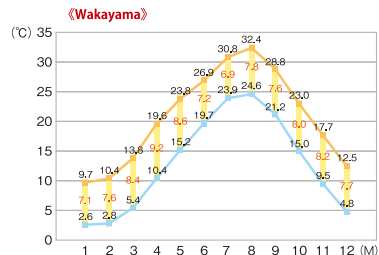
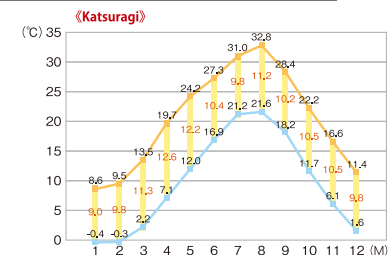


### Climate characteristics of the base of Mt.Koya

Mean temperature difference (1981~2010)

● Meteorological Statistics Information by the Japan Meteorological Agency

Temperature difference Maximum temperature Minimum temperature



## With More Affection and Care, More Delicious Persimmons

Not only climate and soil but time and effort farmers spend also deeply affect the taste of persimmons. The important points are “thinning buds” and “removing excess fruitlets”. These two operations are essential to concentrate nutrients on selected fruits to make them large and sweet. The farmers thin the buds from late April to the middle of May. Buds growing downwards around the center of the branches are mainly left to continue growing. Whereas, buds growing upwards and around the bottom of the branches are removed as they can be burned by sunshine and hindered by other branches. In the end, about 80% of buds are eliminated. Out of all the young fruits growing from late June to July, only the ones with large calyxes are left, expected to grow big enough. After the “thinning buds” and “removing excess fruitlets” processes, the total amount of fruits that are harvested from one tree will be one-tenth of the original amount of whole buds.

Another unique process farmers carry out is “side branch girdling”. Nutrients from the roots reach the fruits through the center of the branches. On the other hand, the nutrients generated by photosynthesis in the leaves return to the roots through the bark. Therefore, shaving off some parts of the bark stops the flow of nutrients returning to the roots. By concentrating the nutrients on the fruits, they get larger and sweeter. There is a risk that the branches can be damaged, but some farmers do “side branch girdling” to produce delicious persimmons as early in the season as possible.



## Japan's Top Producer! Having Confidence in Taste

The history of persimmons is long. It is said that in Japan, persimmons were already cultivated by the end of the 6th century, and commercial cultivation started in the Tokugawa Era. *Gosho*, *Fudegaki*, and other types of persimmons were mainly cultivated at that time. In the Meiji Era, the national experiment station investigated persimmons throughout the whole of Japan, and the superior types of persimmons, such as *Hiratanenashi*, *Fuyu*, and *Jiro*, which are very popular until now, started to be cultivated all over Japan. There are about 1,000 types of persimmons in Japan. Some of them begin to be picked in September, and *Fuyu*, which starts to ripen later, continues to be harvested until the beginning of December.

It is not clear about the origin of persimmons in Wakayama Prefecture, but it is said that they were already cultivated and sold from around 1590 in the Ito region. The main types of persimmons cultivated in Wakayama are *Tonewase*, *Nakataniwase*, and *Hiratanenashi*, which are astringent persimmons, and *Fuyu*, which is a sweet persimmon. Wakayama used to focus on growing sweet persimmons like *Fuyu*. However, thanks to an improvement of astringency removal technology since around 1980, astringent persimmon types like *Hiratanenashi* and *Tonewase* have been increased, amounting now to about 70% of whole productions.

Roughly speaking, astringent persimmons are angular, and sweet persimmons are round in shape. Strangely enough, a *Fuyu* persimmon contains astringency when the fruit is still young around July but does not when it becomes fully ripe.\*1 The origin of the astringency of persimmons is tannin. However, as the color of *Fuyu* gradually turns into orange, the tannin becomes less and less, which is thought to make it sweet enough without removing the astringency. In the north of Kanto Region, the temperature is so low that even a sweet persimmon tree produces astringent fruits. Therefore, the main producing areas of sweet persimmons are limited to the southwestern part of Japan, where the climate is relatively warm.

On the other hand, an astringent persimmon includes tannin even during the harvest season. Because tannin is water-soluble, people experience a dry taste when it reacts to their saliva. By removing the astringency with carbonic acid gas from these persimmons after harvesting, the tannin changes to become insoluble, making them taste less dry.

\*1 This is the similar taste as when you drink dry wine.



## Black and Sweet!? *Kinokawa-kaki*

Persimmons generally have their astringency removed after harvesting, but *Kinokawa-kaki* grown in Kinokawa City, Wakayama Prefecture, have them eliminated while they are on the tree before harvest. The farmers cover each fruit with a plastic bag with solid alcohol for one day. Afterwards, they open the bottom of the bag and wait for harvest until it becomes fully ripe. *Kinokawa-kaki*'s main features are high sugar contents and the black specks which appear on the flesh of the fruit. Many

people are surprised at this appearance when they see it for the first time. The black part is coagulated “soluble shibuol” , a type of tannin, which generates a crunchy texture. Because it usually takes a long time and a great deal of effort to cover each fruit with a plastic bag, they are not produced in large volumes and are rare in markets. As a result, they are very chewy, juicy and sweet, which makes

persimmons grown in Wakayama special.

Wakayama has confidence in the taste of *Fuyu* persimmons as well. *Fuyu*, which benefits from the soil, temperature and climate in Wakayama, is a superb persimmon in terms of “taste, color, and shape” . Another type of persimmon is called “*Kanjuku*” , which is made when *Fuyu* are covered by a black bag until becoming ripe. They become much sweeter and are a rare and premium persimmon.



## Popular as Health Foods! Processed Persimmon Products

It is said that a delicious persimmon is smooth, colorful, and large. A tip of choosing a good persimmon is to look at its calyx. The calyx has stomata, and fruit growth is suppressed, if the calyx is damaged. It is best to choose a persimmon with a large calyx and less space between the fruit and the calyx. You may know the saying, “An apple a day keeps the doctor away”, and in Japan, it changes to “A persimmon a day keeps the doctor away” because persimmons are nutritious fruits. One persimmon includes enough vitamin C to fulfill the daily need. Besides, the tannin in the fruit, which belongs to the group of polyphenols, is said to have a strong antioxidant effect. So if a person eats one persimmon before drinking, it is said that it can prevent people from having a heavy hangover the next day.

Wakayama is known as the top persimmon producer in Japan, and the production of processed persimmons is also prosperous. You can easily enjoy processed persimmons such as *Anpokaki*, a type of dried persimmon, which includes more moisture than general dried persimmons and dried persimmons on a skewer which are used for decoration at New Year, and *Kakisu*, persimmon vinegar, which is said to be a health food because it contains a wealth of potassium after fermentation and maturation. When the trees on the mountains change their color, we would like you to feel the atmosphere of autumn and enjoy persimmons grown in Wakayama.

