

Wakayama Nanko-Ume

Careful Works Generate Mellow Flavor



Local People and Climate Vol. $\!3$

apan's Best Ume Production Area,

"a Place Where You Can See a Millions of Ume Trees and Enjoy the Fragrance from Twenty Miles Away"

In February, when Wakayama sometimes has little snow though its climate is relatively warm, you can see great number of ume blossoms in mountainous areas located in the central part of the prefecture. Since old times, Japanese people have been familiar with pink or white ume blossoms which bloom attractively in bitter cold. You can find lots of poetries admiring the beauty of the ume blossoms in *Manyoshu*, the oldest anthology of poems in Japan.

There is a saying, "You can see millions of ume trees and enjoy the fragrance from twenty miles away" that describes Minabe Bairin full of ume blossoms on small mountains.

In the Hidaka region which Minabe Town belongs to, there are few plain areas because the Kii Mountains lies close to the coastline, and the soil is sterile and very gravelly.

These conditions were not suitable for rice farming. Therefore, the Kishu Tanabe Domain

promoted the cultivation of ume, which can grow on the slope of mountains and in nutritionally poor fields. This was the start of Minabe Town becoming a major production area of ume.

In Minabe Town, affected by the Black Current flowing into the Kii Channel, the temperature gap is quite small throughout the year, and it is blessed with a warm climate. Though it rains a lot during rainy season in June and September, the annual number of sunny days is over 200 and the hours of sunlight are long. Furthermore, the soil in Minabe Town is the most suitable for ume cultivation because it is neutral and well drained.

Now, the ume yield in Wakayama is about 70 thousands tons, which occupies more than 60% of the total in Japan. 34 thousands tons of ume are harvested in Minabe Town, which amounts to about 30% of the national yield. Minabe Town is the most popular town in Japan for its ume both in name and reality.



Temperature in Minabe Town



Annual average temperature : 17.4 degree Celsius Annual amount of rain : 2,149mm Annual hours of sunlight : 2,340 hours Weather Data of Minabe Town (January to December, 2016) (Provided by : Plum 21 Research Center (Observation point))





The Rising Star of The Producing Area, "Nanko-Ume"

The Birth of "Nanko-Ume"

Ume cultivation started in the Edo era. People have developed the agricultural system suitable for the region in these 400 years, and created the prominent regional varieties of ume. Surrounding the vast ume orchards in Minabe and Tanabe regions where farmers have cultivated sloping, fragile and sterile farms, the coppice forest (Ubame oak, material of Binchotan charcoal) has been arranged in order to conserve the water source and to prevent a collapse. Japanese honeybees which like to inhabit the coppice forest also play an important role in helping the pollination of ume. These utilizations of local resources contribute to the sustainable production of high-quality ume.

However, the farmers had cultivated diverse ume varieties until around 1950, and the qualities were varied as well. Therefore, in 1950, Kami-Minabe Agricultural Cooperative (currently Kishu Agricultural Cooperative) established the "The Committee for Investigating and Selecting Excellent Mother Trees" to make the market stable and to select ume suitable for the region. Mr. Katsutaro Takenaka, a teacher at the horticulture department of Minabe High School (abbreviated as Nanko), was appointed as the chairman. At that time, there were no less than 114 types of ume cultivated in the region, and it took five years to select the most superior variety. Later, this variety was named "Nanko-Ume" in honor of the efforts of the students from Minabe High School who contributed greatly to the selection and investigation of the mother trees.

"Nanko-Ume" fruit is characterized by the large, thin-skinned and soft pulpy flesh. It is the highest quality variety for making umeboshi (pickled ume) and also used for various products such as umeshu (ume liqueur), juice, and jam. It is ranked as the Japanese best ume brand.

The cyclic agricultural system centering on ume cultivation, known as "The Minabe-Tanabe Ume system", was designated as a Globally Important Agricultural Heritage System by Food and Agriculture Organization of United Nations in 2015.

Traditional Ume Cultivation

Because people don't eat raw ume, much attention has not been paid to developing tastes and cultivation methods. Rather, the farmers had cultivated ume by the ways handed down from generation to generation with the belief that "making delicious ume starts from growing healthy trees".

The region has soil which cannot keep much water and fertilizer. The ume trees have shallow roots mostly within 40 cm deep. As a result, an ume tree is strongly affected by a drought. The farmers have to irrigate orchards when it continues to be sunny for a long time in summer, but they have difficulty irrigating the sloping fields. Therefore, it is important to improve the soil, such as increasing its water holding capacity throughout deep plowing and spreading organic matters.

Pruning is also an important practice. It is performed for about 3 months, from November until to the blooming period. Pruning makes a work-effective tree form by allowing the light to pour into the center of it. As farmers don't thin out superfluous fruits in ume cultivation, pruning helps the tree to adjust fruit set and to ensure a stable production. There is a proverb, "Prune your ume trees, but not your cherry trees", meaning that after removing branches as much as you can, the ume tree will easily bear fruit.

"Nanko-Ume" cannot be pollenated by itself and so, in the ume production areas in Wakayama, the other ume varieties with large amount of pollens whose blooming season is the same as that of the "Nanko-Ume" are planted in the same orchards. At the same time, the farmers release honeybees in the orchards during the blooming period to help with pollination. Honeybees are the very important partners for farmers. Honeybees are active during daytime when the temperature is higher than 12 degrees Celsius and the wind velocity is less than 3 meters per second. For this reason, a nest box is set in a sunny spot where a north wind will not hit it.

What is The Minabe-Tanabe Ume System?

The cyclic agricultural system centering on ume cultivation, known as "The Minabe-Tanabe Ume system", was certified as a Globally Important Agricultural Heritage System by Food and Agriculture Organization of the United Nations in 2015

Point 1 Water Retention of Barren Mountains, Realization of Disaster Prevention As ume is cultivated on fragile slopes in the mountains which have nutritiously poor soil, *Satoyama*,

Rain

Slope Collapse

Prevention

As ume is cultivated on tragile slopes in the mountains which have nutritiously poor soil, *Satoyama*, beautiful rural terrestrial landscapes, are secured by arranging fuelwood forests around ume orchards such as Ubamegashi oaks, material of *Bincho* charcoal, in order to hold water and to prevent a collapse.

> Point 2 Symbiotic Relationship with the Japanese Honeybees Honeybees settling down in fuelwood forests help with the pollination of "Nanko-Ume" which cannot be self-pollinated. Point 3 From the Production of Ume to Processing and Selling The entire community is consistently in charge of production to selling.

Point 4 Protection of Various Ecosystems

The natural environment is protected, and the various ecosystems are sustained by prevention of slope collapse and soil runoff.



What is the Globally Important Agricultural Heritage Systems (GIAHS)?

It is an initiative launched in 2002 by Food and Agriculture Organization of the United Nations (FAO based in Rome, Italy), which registers important traditional agriculture (including forestry and fisheries), rural culture, and agricultural landscapes that should be inherited by the next generation and plans the maintenance and sustainable utilization of them. Until now, 36 regions in 15 countries and 8 regions in Japan including "Minabe-Tanabe" have been certified. For more details, please go to the website: https://www.giahs-minabetanabe.jp/

Special Process of Making Umeboshi – Keep the Fresh Taste!

The Harvesting Season

The harvest of young "Nanko-Ume" fruit begins at the end of May and lasts to the middle of June. Young ume fruit is distributed as fresh to the market and sold at stores as ingredients for home-made umeboshi, umeshu, and ume syrup.

From the middle to the end of June, the sweet-sour fragrance of the fully ripe and yellow ume spreads over the area. When the farmers harvest fully ripe ume, they pick some of them directly from the trees by hand. "Nanko-Ume" fruit for making umeboshi is harvested by setting a net under a tree so that the fruit is not damaged when they naturally fall after ripening fully. This is the harvesting method particular to this area. The farmers collect the ume caught in the nets every day, and preserve them in salt on the same day.

From generation to generation, the aim of the farmers who run a business for producing and processing ume in Minabe Town is to make umeboshi as soft as luxury silk called "*Habutae*". When preserving ume, the farmers change the way they use salt depending on the ripeness of the ume. A producer says, "The ripeness of ume caught in the net changes slightly during the harvest and preservation period depending on the condition of the sunshine in the field. Salt seasoning is very difficult as it varies according to the fruit size".

Harvested ume is preserved for 20 to 25 days in only unrefined salt and dried under the sun for 3 to 5 days. "*Shiraboshi Ume*" is made in this way with a salinity of 20% (This series of work is called primary processing). "*Shiraboshi Ume*" is sold to local processors as a raw material to be used for the secondary processing



products (seasoning salted ume) and they are also typically distributed as traditional salted ume.

It is said that there are about 3,000 farmers who perform the primary processing in Minabe-Tanabe regions. The processors who engage in the secondary processing are located close to each other in the area. Ume is essential for the local economy.





A Treasure Chest of Delicious Ume Products

"Nanko-Ume" can be processed into various products such as umeboshi, drinks and sweets depending on their ripeness when harvested. Young ume fruit is processed

into umeshu, ume syrup, pickled ume in soy sauce or vinegar, ume extracts, and candied ume.

Fully ripened ume is suitable for umeboshi, ume jam and so on. In Wakayama Prefecture, not only young but also fully ripened fruit is used as an ingredient for umeshu, and especially ones picked by hand give it a deep and fruity taste.



Fully ripened ume fruit harvested after naturally falling from the tree is turned into soft-flesh umeboshi.

Various products are made by using salted ume with a seasoning; "Shiozuke Umeboshi" with over 10% salt content; vividly colored "Shiso Ume"; "Hachimitsu Ume" sweetened with honey which is especially popular among children and women; "Katsuo Ume" (bonito-flavored Umeboshi). Umeboshi with low salt content is getting popular little by little.

The Potentials of Ume

Nanko-Ume has characteristic that the part of its fruit skin blessed with rich sunshine turns vivid red color. "Beni Nanko", with a beautiful red color, is highly valued and is getting popular in the market. At the same time, umeshu and ume jam made by only "Beni Nanko" have already been produced.

New ume varieties have been developed which focus on certain beneficial components. This includes 'Tsuyu Akane' which has red flesh with an abundance of anthocyanin, 'Toko' which has orange flesh with an abundance of β -carotene and 'Suikou' with a pear fragrance.

These varieties are expected to be the new ones leading the next generation of the ume producing areas of Nanko-Ume because they have the potential to develop processed products other than umeboshi by making use of their wide range of characteristics.

The Ume Effect

Ume has been cherished as food and medicine in Japan for 1,300 years. Umeboshi has been eaten in Japanese cuisine as an everyday side dish because it can be preserved well at a natural temperature and have medicinal effects such as preventing food poisoning and recovering from fatigue.

In recent years, umeboshi have become well known as a way to prevent heatstroke thanks to their salt content.

Some research reports have revealed that ume has health beneficial substances such as citric acid which helps with recovery from fatigue, and polyphenols which suppress oxidation reaction of reactive oxygen.

The research on benefits and components of ume are still ongoing. However, ume has long been celebrated as a healthy food since ancient times. Ume is good for health. Ume is good for fatigue recovery. We would like you to enjoy ume in its various ways, which has been familiar among Japanese people and essential to Japanese cuisine for hundreds of years.



Calendar of Operations for Nanko-Ume Cultivation

January	February	March	April	May	June	July	August	September	October	November	December
Blooming					Harvesting		Making Umeboshi				
		Fertilization Fertilization		ertilization	Fertilization			Fertilization Imp		roving Soil Quality	
Pruning										Pru	ning

For More Information on Foods of Wakayama Prefecture…

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 To inquire about foods of Wakayama...

Wakayama Prefecture Agriculture, Forestry and Fisheries Department

Food Promotion Division

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