



Old trees of Akita Sugi



Kutsuzawa Seizaisho

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established in 1927

received Prime Minister Award (Forest products) in 2013



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Odate, Akita



Akita Sugi Miso Oke Koji Futa

秋田杉
味噌桶
麹蓋

 Kutsuzawa Seizaisho

AKITA
杵澤製材所
JAPAN
since 1927

‘Temae-Miso’ ages within the “Kioke”

Some maintain that the “kioke” is more than just a tool, it’s **the** essential ingredient required to authentically ferment Japanese foods.

words by food writer / author Nancy Singleton Hachisu

■ Why we Japanese use the Kioke for Miso making

As author Nancy Singleton Hachisu explains, ‘the Kioke is the essential ingredient’. The Kioke - or traditional wooden tub - is not just a ‘container’ but is regarded as a critical ingredient in the world of Japanese fermentation.

Japanese people have understood from ancient times that the Kioke plays an important part in fermenting foods. They relied on this wisdom to produce Miso for family members and spared neither effort nor care in producing this delicious homemade staple. The pride people had in this traditional art led to the expression ‘Temae-Miso’, which means “to sing one’s own praises” .

It is said that the wooden Oke (tub) and Taru (barrel) first became popular during the Muromachi Era (1336- 1573) and that ever since the Kioke has been an essential part of the manufacture of traditional Japanese ferments such as Miso, Shoyu and Sake. There is a special reason for this.

The wood itself can be host to millions of beneficial microbes such as Koji-kin and lactic-acid that are critical to the fermentation process, and the wood retains the microbes, where they thrive and continue to work for Miso or Shoyu making without being washed away. The longer a particular Kioke is used the more its unique biome contributes to the character of the product stored and fermented within it.

A Kioke is a “magic vessel” that fully utilises the properties of the wood to control moisture content

and temperature. The internal structure of wood is very porous: made up of long, thin tubular cells to which microorganisms can adhere. These cells also transport moisture to regulate moisture content and temperature, creating a perfect environment for fermentation.

With these excellent powers, microorganisms attached to the Kioke will continue to be active for many years. In this way, the function of the wood combined with the love of the maker create the delicious miso that is so unique in its taste.

The sawmill Kutsuzawa Seizaisho, which will soon celebrate its 100th year in business, while always improving, they still rely heavily on the traditional techniques necessary to produce the tubs and barrels out of the finest Akita Sugi.

This catalogue showcases the charm of Miso Kioke and Koji Futa to anyone interested in the art of miso-making.

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established 1927

*“Kioke” … wooden tub
*“Koji Futa” … koji tray
 (“Koji Buta”)



Bringing natural materials to life 1

The difference between an "Oke" and a "Taru"

“Oke” and “taru” are often used interchangeably, but different names mean different uses. To put it simply, an oke or tub is a “container that is used any number of times” and a taru or barrel is a “container that is used only a few times” . Since the method of manufacture is also different, in the past there were separate craftsmen for oke and taru.

Oke 桶

- ① Used over and over. Repair if damaged and continue using.
- ② Very robust
- ③ A container used for storing water for a short period of time or for the manufacture of fermented foods.
- ④ Lid is separate from the body of the oke or indeed used without a lid
- ⑤ No specific capacity
(Traditional container for serving rice, basin, bath tub, ladle, etc.)

Taru 樽

- ① Used only a few times. Many are discarded after a single use
- ② More rudimentary manufacturing
- ③ A container for carrying brewed beverages
- ④ The lid is fixed to the body
- ⑤ The capacity of barrels is specified
(Comes in units of “To”, with one “To” approximately 18 litres)

In cooperation with
Dietary Advisor and Miso Sommelier Akiko Koyama
Koji and co Founder Saeko Iida
Hokuroku Shimbun Co., Ltd.
Akitedge Co., Ltd.
Toko Computer Service Co., Ltd.

“Akita Sugi Oke” and miso making go well together.

Kutsuzawa Seizaisho's miso oke and koji futa are made from Sugi felled locally in Akita Prefecture. "Wakan Sansai Zue" (Japan's first pictorial encyclopaedia), published in the middle of the Edo period, ranked materials used for oke, placing "Sugi" at the very top. There is also mention that if "Sugi moss" (being the planed shavings of Sugi) are thrown into sake it will achieve the same effect as using barrels made of Sugi. You can see that Sugi has been indispensable as a wood used in the manufacture of traditional

Japanese fermented foods such as miso, shoyu, and sake. Akita Sugi grows slowly in the cold and snowy environment of Akita Prefecture, and is characterized by its fine grain. The older the tree, the tighter the grain, the more beautiful and stronger it becomes, and the less the wood expands and contracts. It has the perfect characteristics for a tub that is used for a long time and which must remain serviceable. That's why Akita Sugi tubs are very compatible with miso making.



Akita Sugi

秋田杉

Sugi is a conifer endemic to Japan and its scientific name is 'Cryptomeria japonica'. Akita Sugi is a specific name for Sugi growing in Akita prefecture.

The traditional craft Akita Sugi Oke and Taru

秋田杉桶樽

In 1984, the entire process from the breaking down of sawlogs to producing the finished product was designated by the Minister of Economy, Trade and Industry as a nationally recognised traditional craft.



Assessing the sawlog for bow and knots



Docking the sawlog



Adjusting the thickness and curvature of the staves with a "sen" (spokeshave)



Trial fit of staves using a temporary jig

Bringing natural materials to life

The different parts and characteristics of Akita sugi

Heartwood 赤身

This part of the wood is dormant having been laid down in previous generations of growth. It stores nutrients and is highly durable and resistant to rot. In Japanese it is called the "red flesh" due to its colour which in turn produces colouring agents.

Transition wood 白線帯

This is the border between the heartwood and the sapwood. This part of the tree is in the process of becoming dormant after it has finished its period of activity.

Sapwood 白太

The sapwood supports the growth of the tree. It has the role of absorbing and transporting water and nutrients from the ground through the roots and storing nutrients made by the leaves. Because the growth rings are very tight in this zone the wood is beautiful when cut and is often used as a decorative material.



Final tightening of the bamboo hoops

秋田杉味噌桶
Akita Sugi
Miso Oke



We have relied on more than the input of just miso sommeliers, our product embodies the needs and preferences of all who love making miso in Kioke and its manufacture. These are authentic Miso Kioke made entirely from natural materials.

- ① We select the heartwood, which is rich in antibacterial properties and highly durable, and assemble it without using chemical adhesives with back sawn material suitable for brewing. The sides are of a generous thickness to maintain watertightness for long periods of time, making the tub suitable for miso making.
- ② The bamboo hoops are woven using traditional techniques, and more hoops are used than in normal tubs to make ours sturdy. In particular, the hoop on the top is tightened at a position close to the mouth so that the opening does not spread.

Bringing natural materials to life 3 Quarter sawn and back sawn

When a log is sawn into a board, the board that runs through the centre of the tree will show vertical grain. This is called "quarter sawn". Boards cut well away from the centreline display a much more curved grain like contour lines. This is called "Back sawn". There are both quarter sawn and back sawn Oke. The use of quarter sawn versus back sawn material in the tub comes down to different timelines. Only back sawn material is used in Taru manufacture.

柁目 Quarter sawn

Quarter sawn material has the property of releasing moisture, so it is suitable only for a limited period of use.



板目 Back sawn

The back cut material is used for tubs intended for long-term use such as those in brewing and storage, and this of course applies to Miso Kioke.



① Heartwood is used generously



③ The upper lid has a rebate so that it does not shift.



② Carefully selected bamboo is woven and tightened



④ The inner lid is sized to match the inside diameter for each sized tub.

③ The upper lid has a rebate to keep it in place.

④ The inner lid is sized to fit within the inside diameter so that the miso does not come in contact with the air.

⑤ The bottom plate is treated with three coats of Kakishibu, a traditional wood treatment derived from persimmon tannin, and which increases its resistance to decay.



⑤ Three coats of Kakishibu are applied to the bottom to increase rot resistance.

■ The use and care of the oke

First use	Normal use	After use
<p>Please carry out an initial soak.</p> <p>Fill the tub about 80% with lukewarm water and then leave overnight to remove the bitterness of the Sugi.</p>	<p>Wipe with a damp cloth.</p> <p>Wipe with a lightly damp cloth before use. Try not to get the bamboo hoops wet.</p>	<p>Do not wash. This will preserve the microbes.</p> <p>In order to leave the microorganisms, if possible wrap in newspaper with a small amount of miso still adhering to it and store in a cool, dark place.</p>

* For detailed handling instructions, please refer to the manual that comes with the product.

秋田杉麴蓋 Akita Sugi Koji Futa



We initially supplied these to breweries but started selling directly due to increasing demand from individual customers. This koji tray was designed for professional use and was developed in collaboration from a master brewer.

Bringing natural materials to life 4
“Ki-omote” (front) and “Ki-ura” (back)

Back sawn material has a front and a back, and the side closer to the bark is called "wood surface" or "Ki-omote", and the side closer to the heart is called "wood back" or "Ki-ura". When making a miso oke from back sawn material, the difference in these properties is also utilized. The Ki-omote is used on the outside of the tub to allow it to acclimatise to the outside air. The Ki-ura is used inside the tub to prevent moisture from leaking out. Quarter sawn material is characterized by good drainage because water permeates along the growth rings. In addition, it is ideal for koji trays because it has little expansion and contraction.

柾目 Quarter sawn

Quartersawn wood sheds water easily. It has a large capacity to control humidity and contains a lot of moisture, but the material has very little expansion and contraction.



Moisture permeates to the bottom following the rings of growth

板目 Back sawn

Preserves moisture. Moisture content tends not to fluctuate, and water and moisture do not pass, but the material tends to expand and contract more.



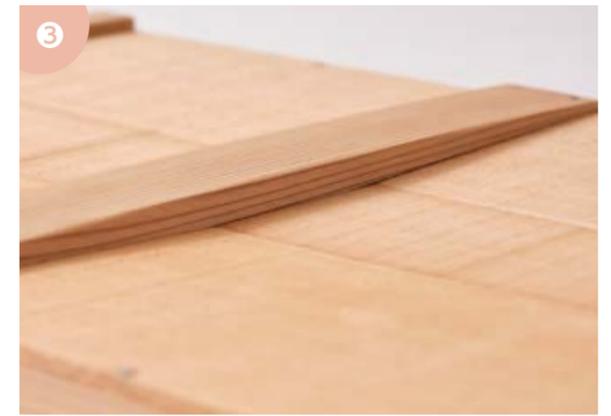
Moisture permeates along the curved grain
“Ki-omote” (front)



Does not allow moisture to pass
“Ki-ura” (back)



1 The design relies on the uneven surface of the quartersawn heartwood



3 Curved brace to prevent deflection



2 The bottom is approximate 6mm thick and the sides 12mm thick.



4 The frame is firmly assembled using Sugi wedges



5 The bottom plate is reinforced with bamboo nails while leaving an appropriate gap.

① We only use clear (no knots) quartersawn heartwood. The unevenness of the wood grain is made so that the koji can be easily loosened, and the finish is similar to that of a hand-split shingle.

② The bottom plate and frame plate are thick and robust so as to withstand many years of professional use.

③ When the koji is piled up, the bottom bends due to the weight. A brace with a built-in camber is incorporated to prevent deflection.

④ A Sugi wedge is hammered into the end grain forming a sturdy joint that will not come apart.

⑤ The bottom plates are fixed with invisible bamboo nails. This increases durability while maintaining good breathability.

■ The use and care of the oke

First use

Initial rinsing

Pour lukewarm water over the entire koji tray. Then leave to dry in sunlight and use after it is dry.

Normal use

Please disinfect with hot water.

Please sterilize with boiling water before use. After that, dry it in the sun and use it after it is completely dry.

After use

Remove all the koji.

Wash in hot water to sterilize it and remove the koji with a brush. After that, dry it in the sun and wrap in newspaper after drying.

* For detailed instructions, please refer to the manual accompanying the product.

1cm
2cm
3cm
4cm
5cm
6cm
7cm
8cm
9cm
10cm
11cm
12cm
13cm
14cm
15cm
16cm
17cm
18cm
19cm
20cm
21cm
22cm
23cm
24cm
25cm
26cm
27cm

味噌桶 Miso Oke



1kg Outside dia 13.0cm×Height 14.5cm Inside dia 11.0cm ×Depth 12.5cm	3kg Outside dia 22.5cm×Height 18.5cm Inside dia 19.0cm ×Depth 15.0cm	6kg Outside dia 22.5cm×Height 30.0cm Inside dia 19.0cm ×Depth 26.5cm	10kg Outside dia 26cm×Height 33.5cm Inside dia 22.0cm ×Depth 30.0cm	20kg Outside dia 32.5cm×Height 41.0cm Inside dia 29.0cm ×Depth 37.0cm
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Miso Oke

- Backsawn
- Bamboo hoops
- Unfinished surface
- Bottom preserved with Kakishibu
- No chemical adhesives used

Koji Futa

- Quartersawn heartwood
- Bamboo nails
- Unfinished surface
- Fitted with bottom brace
- No chemical adhesives used

Stone weight

- Domestically quarried white granite
- Natural finish
- Polished to mirror finish
- Stainless steel handle

※Dimensions may vary slightly due to products being handmade.

※Some stainless steel nails are used for reinforcement.

麹蓋 Koji Futa



1.5kg
Outside dimensions: Length 52.0cm×Width 35.5cm×Height 6.0cm
Inside dimensions: Length 43.5cm×Width 30.3cm×Depth 5.0cm
Frame wall thickness greater than 1.2cm

1kg
Outside dimensions: Length 39.0cm×Width 27.0cm×Height 6.0cm
Inside dimensions: Length 32.4cm×Width 21.7cm×Depth 5.0cm
Frame wall thickness greater than 0.6cm

重石 Stone weight

(For 3kg and 6kg Miso Oke)

Original Kutsuzawa Seizaisho product - domestically quarried white granite



The size is perfect for the inside diameter of the miso tub ensuring that the miso does not come into contact with the air. It is an originally developed weight that matches the size of our miso tubs. The stainless steel wire handle makes it easy to place and remove.

2.5kg
18cm Dia×3.6cm



For the 6kg tub, two weights can be used.
* Please contact us for other sizes.