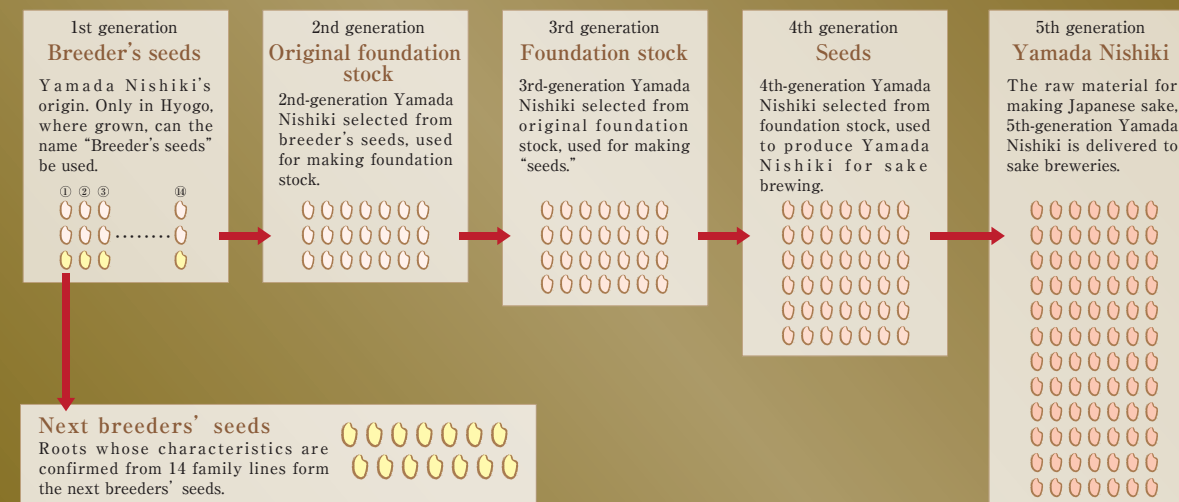


Seeds of Yamada Nishiki preserved by Hyogo Prefecture

Yamada Nishiki was developed in Hyogo Prefecture in 1936. Since then its seeds have been strictly controlled to protect its high quality characteristics. Each year, farmers in Hyogo grow Yamada Nishiki using these seeds. As shown below, the Yamada Nishiki's original characteristics have been rigidly maintained since the first breeder's seeds. Yamada Nishiki is a thoroughbred of sake-brewing rice that further enriches the flavor of Japanese sake.



Hyogo Prefecture provides more than Yamada Nishiki

Also from the sake rice kingdom of Hyogo

Gohyaku Mangoku

Grains and white cores larger than Yamada Nishiki

Hyogo Kita Nishiki

In the Yamada Nishiki family

Hyogo Yume Nishiki

Produced only in Hyogo

Fukunohana



Aiming for a new world,
the Yamada Nishiki
challenge continues

Hyogo Prefecture

Hyogo Sake Rice Association

HYOGO PREFECTURAL HEADQUARTERS NATIONAL FEDERATION OF
AGRICULTURAL CO-OPERATIVE ASSOCIATIONS

Yamada Nishiki, from Hyogo Prefecture,
Celebrating its 80th anniversary

Making Hyogo the Land of Sake

Hidetoshi Nakata

While holding events around the world to promote sake, Hidetoshi Nakata also actively goes to see brewing in action. Based on his firsthand experiences of sake culture—he has been to around 250 breweries—and the voices of those who make it, he notes, “Information on sake and the rice used to make it has not been properly shared, even with Japanese people. Even though it is seen as obvious in the industry, I don’t think there’s really anyone in the general public who knows that the rice used for sake is different than that for eating. There’s probably no one who can name ten sake brands, never mind the rice it’s made from. Even naming ten kinds of rice produced as food would be hard. Japanese people have not been educated about food, and I think that their understanding of its essential nature is pretty weak.” He says that this is the reason that Yamada Nishiki needs to be actively promoted in various ways. “No matter what brewery you go to, everyone talks about how Yamada Nishiki from Hyogo prefecture is firmer and thicker than rice from other prefectures. However,



Photo: Junichi Takahashi

there’s still little information on its terroir, the quality of the soil.” By working to properly share such information with customers, the possibilities of sake and brewing rice can rapidly expand. With this in mind, Nakata took part in the development of the sake search application “Sakenomy.” It’s one tool for delivering this knowledge to people. “Rice quality greatly affects sake quality, although it is difficult to generalize. Gohyaku Mangoku doesn’t give you a flavor like Yamada Nishiki, and in the same way Yamada Nishiki isn’t Omachi. Each has their own nature, which serve as a basis for consumer decisions. Put simply, I want to make ‘Sakenomy’ the Google of sake. One can learn with the information it provides, and then choose what to drink. It all can be done just with this app. In addition, it also has to provide information on food pairings, ingredients like rice and water, and so on.” Even in the case of a top sake-brewing rice like Yamada Nishiki, the public’s awareness of it is inadequate, which leads to there being not enough growers. Nakata, who says that branding is important for creating an environment in which young people in their twenties and thirties want to grow the rice, suggested to hold a sake competition in Hyogo to share sake with the world. “When introducing sake to people from overseas, they have trouble understanding that while wine-making is about the land on which the grapes were grown, sake is more than just that. Thus it needs to be



Photo: Junichi Takahashi

emphasized that the land is an important aspect of sake. It’d be interesting to hold a competition to share Japanese sake in Hyogo. I think everyone would understand if we said that we are doing it here because people here make some wonderful rice; they’d get that this is the land of sake. In the end this will not only support sake breweries throughout Japan, but also lead to people involved in growing other sake-brewing rice working even harder to not get left behind. What’s wonderful about Yamada Nishiki is that everyone in the industry knows about it. In the future it can play the role of bringing other rice forward.” Nakata has not only become knowledgeable about sake, but also participated in planting and harvesting sake-brewing rice in Hyogo. Smiling, he says that he has done it both with a combine and with his hands. He seems to take much pleasure in the world of sake. In closing, he offered supporting words to those involved in Yamada Nishiki: “It all depends on the ideas people come up with—both sake and brewing rice should get even more interesting.”

Hidetoshi Nakata Profile

Nakata has appeared in the FIFA World Cup three times as a member of Japan’s team. After retiring he continued to travel in Japan as well as overseas. In 2009, he established the Take Action Foundation. His domestic travel during the same year led him to establish the Revalue Nippon Project that supports traditional Japanese culture, folk crafts, and so on. While traveling in Japan, he encountered the fascinating world of sake. He has visited 250 breweries. Since 2014 he has worked as a presenter at the Sake Competition, which decides the top sake in the world. In 2015, he established the Japan Craft Sake Company. Since 2003 he has been Tohato’s Corporate Brand Officer.

Sake Shop

Connecting Yamada Nishiki and Consumers

Increasing Value with Terroir

Koichi Hasegawa
President/CEO, Hasegawa Saketen, Inc.

Koichi Hasegawa says, “When going to breweries around Japan, I sometimes ask them to make Junmai Ginjo with Hyogo Prefecture Yamada Nishiki. That’s how much I think it can make good sake.” Hasegawa, who actively works to increase people’s awareness of sake through the Sake Competition and so on, shared his thoughts about terroir. “If the amount of sake exported increases, requests to see where its rice is produced will grow. During such visits, there’s a need to explain the area’s terroir—history, soil, climate, people, and so on—as well as about Yamada Nishiki itself. By doing so, sake’s value increases.” Hasegawa firmly believes that the sake market is growing. “Ingredients are not things to just be delivered to breweries. I think brewers should themselves go to the farmers, to where the ingredients are produced, and see it all for themselves while exchanging information. By doing so, the value of Hyogo Prefecture’s terroir will probably increase as well.” In closing, he said that the Sake Brewing Rice Trial Plot is a Hyogo treasure, and research should be expanded with donations from breweries throughout the country.



Hasegawa Saketen, Inc.
President/CEO Koichi Hasegawa has been to over 1,000 breweries throughout the country, seeking to discover new sake. The company has locations in Omotesando Hills, at Tokyo Skytree, and many other popular spots. Hasegawa works to promote sake both inside and outside of Japan.

Sake’s Elegance

Satoshi Kimijima
President, Yokohama Kimijimaya Co., Ltd.

“I think that taste of sake is first decided by the brewing rice. Through many years of tasting sake, I’ve come to understand that Hyogo Yamada Nishiki is an ingredient from which one can draw a dignified and sophisticated flavor,” says sake and wine lecturer and IWC panel chairmen Satoshi Kimijima. Seeking good-tasting sake, he arrived at its rice: “There is no better brewing rice than Hyogo Yamada Nishiki. Its top quality is thanks to its terroir: the soil, climate, and people. Each rice paddy produces different sake.” He says that Yamada Nishiki paddies are top-class fields like Burgundy’s Montrachet. “Sake made with rice from these fields has a depth the same as or greater than wine in terms of flavor and aroma. Compared to this depth, its price is too low. We should have highly acclaimed sake that is graded like wine. I think that this will definitely happen if it is exported and establishes a reputation. This kind of reputation will create confidence and pride in growers, and also lead to an increase in their numbers.” Regarding the future of Yamada Nishiki, Kimijima states, “Put in terms of wine, it should go in the direction of terroir and natural farming. I’d like for even more of an emphasis to be placed on quality instead of quantity.”



Yokohama Kimijimaya Co., Ltd.
Satoshi Kimijima is the fourth generation head of Yokohama Kimijimaya Co., Ltd. He tries to offer high quality and good-tasting sake—even if it is unknown—as well as sake whose producers are clear. In addition to being an IWC panel chairmen and working as a sake lecturer, he also holds sake seminars overseas.

Yamada Nishiki from Hyogo Prefecture: Reasons for choosing & expectations

Survey results on Yamada Nishiki produced in Hyogo Prefecture

No. 1 Koji (rice mold) is easy to grow, and of high quality 45%

No. 2 Sake smells good 12%

**No. 3 Excellent rice polishing characteristics
(less broken rice, low rate of unavailable rice polishing, etc.) 11%**

No. 4 Less soaking crack grains (immersion cracks) of rice polishing when absorbing water

No. 5 Low protein

No. 6 High rate of white-core manifestation

No. 7 Large grain size

No. 8 Uniform grains

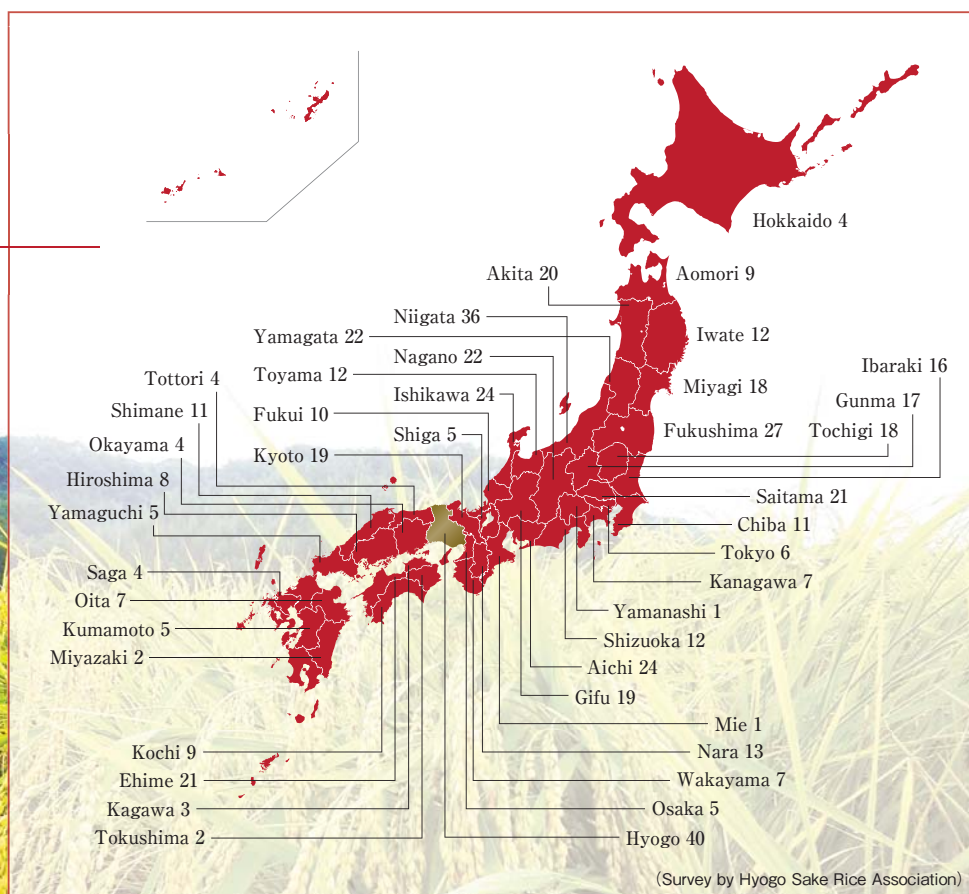
[In addition]

- Easily digestible (solubility) • Akiagari is available (sake first released in early autumn)
- Produces best quality sake • Complete sake quality (range of tastes) • Rich taste and high clarity
- More stable brewing • Delicate sweetness (delicious flavor) even up to the same SMV (sake meter value)
- Suitable for exhibitions • Expected high-grade rich taste unique to Yamada Nishiki

* Based on the responses from 300 sake breweries and 5 sake brewer associations in Japan to a survey on Yamada Nishiki produced in Hyogo Prefecture (conducted September 2015).

Yamada Nishiki is used at 543 sake breweries in Japan.

Yamada Nishiki is delivered through JA Group Hyogo to sake brewing companies in 43 prefectures from Hokkaido in the north to Miyazaki in the south.



Bonds with sake breweries in Hyogo, moving forward together

Yamada Nishiki continues evolving with its wonderful history

Nada's sake breweries, referred to as the Nada Gogo, are some of the most famous in Japan. Through the MURAMAI System*, a unique sake rice dealing system in Hyogo area, they are strongly connected to Yamada Nishiki in a way not found in other prefectures. "Having thought about rice quality with farmers and made sake together—it's really a valuable history for Nada's sake breweries," says Kenji Kano. According to Kenji Kano, Yamada Nishiki is a rice ideally suited for brewing sake due to the shape of the white core, its balanced composition, and so on. "When machines weren't developed, our predecessors used

their considerable knowledge and experience to figure out its superiority. Thus they began to grow it. I think it's wonderful that it has continued to be the best brewing rice for eighty years." Some visitors from overseas at the Hakutsuru Sake Brewery Museum ask to see the paddies where this rice is produced. "In the West and some other areas, people are becoming more health-conscious, so I'd like to take the lead in promoting our sake as an agricultural product that's made with the blessings of Hyogo's natural environment. Both sake and Yamada Nishiki are profound. I'd like to try out various possibilities."

Kenji Kano
President, Nadagogo Brewers Association
(President, Hakutsuru Sake Brewing Co., Ltd.)



Hakutsuru Sake Brewing Co., Ltd.
Established in 1743, the company name was changed to Hakutsuru Sake Brewing Co., Ltd. in 1947. Under the slogan, "To Friendship for all time", the company strives to combine old traditions and new technologies in its sake brewing.

*MURAMAI System is a contract farming system unique to the area that has been established to strengthen cooperation between breweries and farmers.

Yamada Nishiki, giving genuine taste of rice

Kenbishi Sake Brewing Co., Ltd., has engaged to maintain its characteristic flavor for over 500 years. The brewery primarily uses Yamada Nishiki produced in Hyogo. Its bonds with producers that have been formed over many years transcend that of buyer and seller: even when the number of breweries using Yamada Nishiki sharply dropped, Kenbishi supported farmers by buying the rice, and after the brewery collapsed due to the Great Hanshin Earthquake, farmers it had contracts with provided support. "Yamada Nishiki has good solubility and

quality. I can say that based on experience, which is the most important when making sake," says Yuichi Fujita. There is also data from the Sake Brewing Rice Trial Plot to back this up. Its solubility is excellent because the amylopectin side chains in its starch are short. Furthermore, an acclaimed seed management system is in place. "Protein remains to some extent, which becomes umami and creates Kenbishi's characteristic flavor." Fujita also noted that there is a need for continued effort to reduce differences in quality due to weather.

Brewing General Manager Yuichi Fujita,
Kenbishi Sake Brewing Co., Ltd.



Kenbishi Sake Brewing Co., Ltd.
Founded before 1505. Moved their cellar from Itami to Nada to establish Kenbishi Sake Brewing Co., Ltd. The spirit of "Always the best throughout history" has been handed down from generation to generation for over 500 years, sustaining its superb taste.

A gift from heaven, Yamada Nishiki has self-made value

Honda Shoten Co., Ltd. has won Gold five years in a row at the Annual Japan Sake Awards. The Chairman, Takeyoshi Honda, loves Hyogo Prefecture Yamada Nishiki more than any other rice cultivars. He is now 83 years old (in 2016), and continues to research the soil of areas in which Yamada Nishiki TOKU'A' (Special place 'A') is produced as a research fellow at Kyoto University. He explains that the goodness of Yamada Nishiki comes from the soil that has smectite in its clay mineral composition, as well as it being grown in Hyogo.

"Yamada Nishiki is nature's blessing. It brings out yeast's characteristics, creating good-tasting sake." Honda Shoten's Tatsuriki sake is receiving acclaim outside of Japan as well. Honda, who is aiming to make sake's Romanée-conti with the best Yamada Nishiki, notes, "The value of Yamada Nishiki is something one creates." Furthermore, to honor Teiji Fujikawa, the foster parent of Yamada Nishiki, he proposes creating a "Teiji Fujikawa Award" given to breweries using and recognizing the quality of Yamada Nishiki.

Chairman Takeyoshi Honda,
Honda Shoten Co., Ltd.



Honda Shoten Co., Ltd.
Engaged exclusively in sake brewing as an overall director of Banshu brewmasters since the Genroku period. Mr. Honda's grandfather was a brewmaster for Hakutsuru. Ahead of all others in the industry, in 1970 he created Ginjo-shu, brewed from thoroughly polished rice. In August 1981, he established the Japan Ginjo Sake Association as its first president. From his conviction that good sake comes from good rice, he is particular about Yamada Nishiki more than others.

80 years later, its popularity remains strong. Yamada Nishiki from Hyogo Prefecture.

Profile of Yamada Nishiki

- Birthday February 27, 1936
- Parents Developed from artificial crossing of female “Yamada bo” and male “Tankan Wataribune.”
- Birthplace Seed and horticultural division at Hyogo Prefecture Agricultural Experiment Station (then Akashi City) and Sake Brewing Rice Experimental Plot (currently the Sake Brewing Rice Trial Plot at the Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries)
- Height Approx. 130 cm (Stem length: 108 cm, Ear length: 20.9 cm)
- Weight Approx. 28.1 g (thousand grains weight of brown rice)
- Features As rice ideally suited for brewing sake, Yamada Nishiki boasts a complete list of advantages including grain size, shape of the white core, moisture level, and low amounts of fats and proteins.

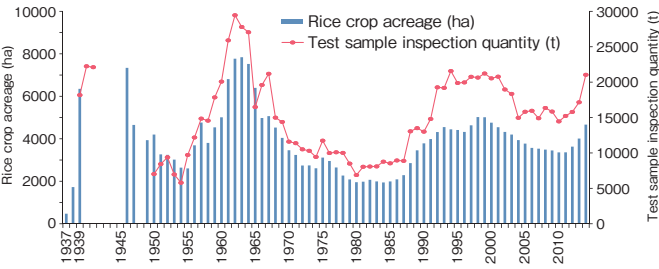
* Height and weight are taken from the “2014 Crop-Weather Relationship Survey (Sake Brewing Rice Trial Plot), Normal Values for Medium Seedlings”.

“Teiji Fujikawa”, foster parent of Yamada Nishiki, is the first researcher of the Sake-brewing Rice Experimental Plot

1895 – 1946 Fujikawa started growing Yamada Nishiki from 1932. Day after day, in rain, shine or storm, he bicycled the approximately 6 km rough mountainous road from his home to the experimental plot, and more than 20 km to the experimental paddy field. Unable to afford a new bike even after so many flats, he continued riding the old one with patched-up tires. In 1936, Yamada Nishiki was designated a recommended variety of the prefecture. But due to World War II, Fujikawa abandoned his research and chose to retire. At age 51, he died from illness. If he could see Yamada Nishiki’s popularity today, he would be so surprised.



Crop acreage and quantity of test samples for inspection of Yamada Nishiki grown in Hyogo



~Center of Research of Sake-brewing Rice~ Sake Brewing Rice Trial Plot in Hyogo

The only research station specialized in sake-brewing rice, breeding of sake-brewing rice and development of cultivation methods

- Organization Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries; Sake Brewing Rice Trial Plot, Agriculture Technology Center Agriculture and Horticulture Division
- History July 1928 Sake-brewing rice experimental plot established in Fukuda, Kato gun (present-day Yashiro town) April 1950 Name of the sake-brewing rice experimental plot changed to “Fukuda foundation seed stock farm” August 1952 Name of the Fukuda foundation seed stock farm changed to “Sake Brewing Rice Trial Plot”

Why is Hyogo Called a Unique “Terroir” for Yamada Nishiki?

Climate and Terrain

The growing region of Yamada Nishiki, spreading over terraced slopes 50–150 m above sea level and valley regions in foothills north of Mt. Rokko, is blessed with perfect climate conditions. Located in the Seto Inland Sea climate zone, the region enjoys mild climate throughout the year with long hours of sunshine and relatively low rainfall. And yet, with the Rokko Mountains blocking the warm air, nighttime temperatures during the grain-filling period are low and the daytime temperature difference exceeds 10°C, producing good rice crops.



Soil

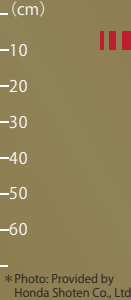
Roots of the rice extend about 1 m deep in the clayey montmorillonite soil common in this region. Deep in soil with strong water and nutrient retention, the roots absorb moisture and nutrients from the lower soil layers. Because its strong roots stretched deep into the lower soil layers, Yamada Nishiki grown in this region survived a withering drought in 1994.



Montmorillonite-rich soil suited for growing Yamada Nishiki (Kato City)



Root system of Yamada Nishiki (Kato City)



* Photo: Provided by Honda Shoten Co., Ltd.

Yamada Nishiki Producer

“Yamada Nishiki is My Life”

Toshihiro Ioo

Head of Yamada Nishiki MURAMAI Division, Yokawa town

Passing Down Yamada Nishiki

“The three elements of climate, soil, and passion are indispensable for growing Yamada Nishiki. This ingredient wouldn’t exist without them,” says Ioo, who has devoted himself to growing Yamada Nishiki. Yamada Nishiki has been grown thanks to the involvement of various people, and the bonds between farmers and breweries are especially strong: “In the case of the MURAMAI System, it is necessary to secure a stable supply of Yamada Nishiki. We help breweries when they are in trouble. The Yamada Nishiki MURAMAI System is built on trusting relationships with breweries.” He says that in the future it will be necessary to check what breweries feel is the strength of TOKU’A’(Special place ‘A’) Yamada Nishiki compared to other Yamada Nishikis. Answering the needs of breweries will support Yamada Nishiki’s future.

In response to the aging of producers, the Yokawa town is working to maintain this producing area by creating producer organizations, such as one for agricultural management. “Having a system for forming relationships with new farmers is also important. They are the people who are shouldering Yamada Nishiki’s future. Furthermore, there is a need for the national or prefectural government to create a systematized mechanism by which people who also have other jobs can grow it in a stable way.”

For both Yamada Nishiki’s future and producers of the next generation, it is important that the prefecture and

Japan Agricultural Cooperatives’ experts properly pass down growing techniques and technology. He says, “We must pass down Yamada Nishiki’s eighty years of history and growing techniques and technology. Furthermore, there is also a need to form close and trusting relationships with consumers. It’s my hope that consumers will drink sake made with Yamada Nishiki and enjoy it more and more.”

Ioo’s inexhaustible passion is apparent in his plans to construct new organizations to pass down his love for Yamada Nishiki to the next generation. In closing, Ioo emphatically remarked, “Yamada Nishiki is my life.”



*Interviews in this booklet were conducted between August and December 2015.

Revealing the Special Features of Yamada Nishiki

Large Grain Size

Thousand grains weight of Yamada Nishiki brown rice is approximately 28.1 g. Koshihikari or other table rice for eating weighs about 22 g.

White Cores

Rate of white-core manifestation is about 70%. Many grains have a linear-shaped white core and high water absorbability, allowing koji (rice mold) to easily enter the grains. (See photo)

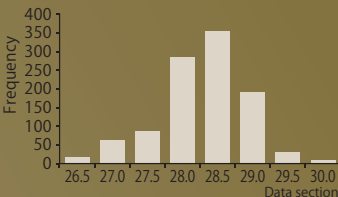
Solubility

Due to short side chains of amylopectin in starch, the starch accumulates slowly, enabling excellent solubility.

*Reference: Hyogo Sakamai Kenkyu Group. Yamada Nishiki monogatari – Hito to fudo ga sodateta Nihon ichi no sakamai. Nojigiku Bunko

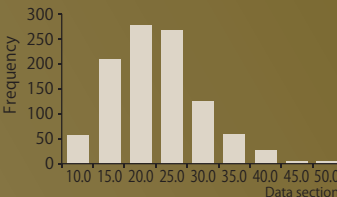
Results of Quality Study on Yamada Nishiki Brown Rice Cropped in 2014

Thousand grains weight (15% moisture content)



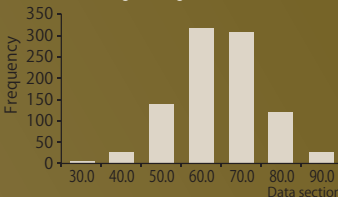
Data count: 1020, Mean: 28.1, SD: 0.60, Min.: 26.1, Max.: 29.9

Grain ratio with thickness ≥ 2.2 mm

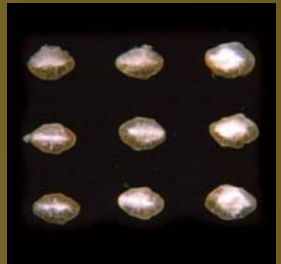


Data count: 1020, Mean: 20.1, SD: 7.07, Min.: 5.3, Max.: 46.3

Rate of white-core manifestation (estimated using cereal grain discrimination device)



Data count: 910, Mean: 59.8, SD: 10.48, Min.: 26.4, Max.: 89.8



Shapes of white cores at cross-sections of brown rice (From left: linear, intermediate, eye-shaped)