

1. The four species of *Seriola*—with differences in quality, prices, and use

Names

Four species in the genus *Seriola* are farmed. Common English and Japanese names are given in the table below.¹ Yellowtail (*S. quinquerediata*) is the most important economically, as it is the main species farmed in Japan, the country with by far the largest farmed production of *Seriola* species.

Species	English common name	Japanese common name
<i>Seriola dumerili</i>	greater amberjack	kampachi ²
<i>Seriola lalandi</i>	yellowtail kingfish, yellowtail amberjack	hiramasa
<i>Seriola quinquerediata</i>	yellowtail, Japanese amberjack	buri, hamachi
<i>Seriola rivoliana</i>	longfin yellowtail	hirenaga-kampachi

English and Japanese common names of four Seriola species.

As for other species, Sicuro and Luzzana write, “Farmed *Seriola* species other than yellowtail are yellowtail kingfish (*S. lalandi*) in Japan and Australia, longfin yellowtail (*S. rivoliana*) in the United States, greater amberjack (*S. dumerili*) in Japan, the Mediterranean and more recently Vietnam, and Pacific yellowtail (*S. mazatlana*) in North and Central America.”³

S. lalandi is farmed by Baja Seas in Mexico and was imported to the U.S. market by Catalina Offshore Products, based in San Diego, and the reference to *S. mazatlana* is likely about this operation.⁴ Some scientists have proposed alternate names for local populations of *S. lalandi*: *Seriola aureovittata* for the Asian population, *Seriola lalandi* for the South Pacific population,

¹ Names from <https://www.fishbase.se/identification/SpeciesList.php?genus=Seriola> (accessed 3 March, 2020).

² In Japanese, it would be spelled カンパチ, which would literally be translated as “kanpachi.” But the “n” sound is changed when speaking to an “m” sound when it is followed by a “p” sound. In this text the kampachi spelling has been used.

³ Benedetto Sicuro & Umberto Luzzana (2016) “The State of *Seriola* spp. Other Than Yellowtail (*S. quinquerediata*) Farming in the World,” *Reviews in Fisheries Science & Aquaculture*, 24:4, 314-325, (from abstract page).

⁴ SeafoodSource staff, “New farmed yellowtail hits US market” 7 March, 2014.

<https://www.seafoodsource.com/news/aquaculture/new-farmed-yellowtail-hits-us-market> (accessed 1 March, 2024).

Seriola mazatlanensis for the population on the Pacific coast of South America,⁵ and *Seriola dorsalis* for the population from the NE Pacific. Other researchers have asserted that these are just isolated populations of the same species.⁶ This argument may become relevant to the industry if it affects the international movement and introduction of hatchery stock.

S. rivoliana farmed in Hawaii was previously marketed in the U.S.A as “Kona Kampachi” by Kampachi Farms.⁷ Successor companies now operate as Ocean Era and Blue Ocean Mariculture in Kona, Hawaii;⁸ and Omega Azul (formerly King Kampachi)⁹, in La Paz, Baja California Sur, Mexico, farming the same species.¹⁰

Natural ranges

The species farmed reflect the natural range of each species, as it is generally discouraged to introduce foreign species into ocean net pens, due to the possibility of escape and the establishment of a breeding population of a non-native species. Land-based production eliminates this concern but is still a small part of overall production.

Seriola dumerili has a very wide circumglobal distribution. Importantly, it is not unique to the Mediterranean Sea, but is widely distributed and already farmed on a large scale in Japan.

Seriola lalandi also has a wide range, but is notably absent in the northeast Atlantic. However, The Kingfish Company, based in Zeeland, the Netherlands¹¹ (previously named Kingfish Zeeland), selected it for land-based production and is now additionally trying to produce it in the U.S. state of Maine. They brand the product as “Dutch Yellowtail.”

Seriola lalandi's range includes southern Australia, which is a probable reason for its selection as an aquaculture subject by Cleans Seas in Port Lincoln, Australia.

⁵ John S. Lucas, Paul C. Southgate, *Aquaculture: Farming Aquatic Animals and Plants*, (John Wiley & Sons, 2012), 430.

⁶ <https://bioone.org/journals/copeia/volume-103/issue-2/CI-124-224/A-Tale-of-Three-Tails--Cryptic-Speciation-in-a/10.1643/CI-124-224.short>

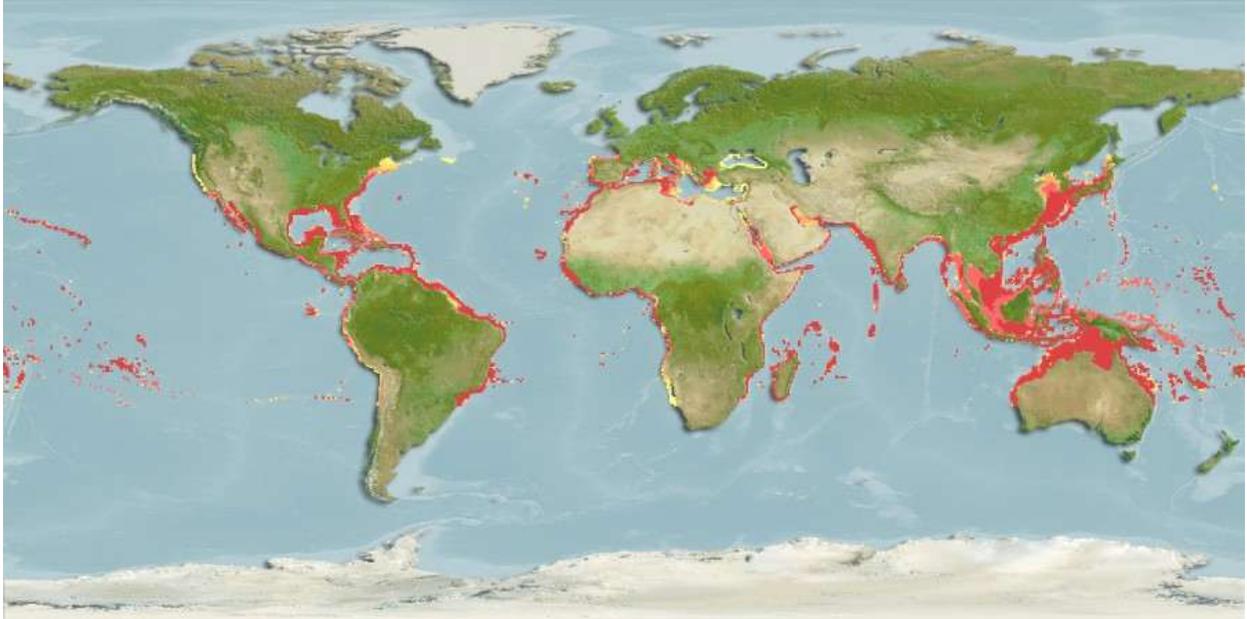
⁷ Sims, N.A. 2013. Kona Blue Water Farms case study: permitting, operations, marketing, environmental impacts, and impediments to expansion of global open ocean mariculture. In A. Lovatelli, J. Aguilar-Manjarrez & D. Soto, eds. Expanding mariculture farther offshore: Technical, environmental, spatial and governance challenges. FAO Technical Workshop, 22–25 March 2010, Orbetello, Italy. FAO Fisheries and Aquaculture Proceedings No. 24. Rome, FAO. pp. 263–296.

⁸ Ocean Era homepage: <http://ocean-era.com/our-fish> (accessed 3 March, 2020). – link not currently functional, alternate source: <http://ocean-era.com/>

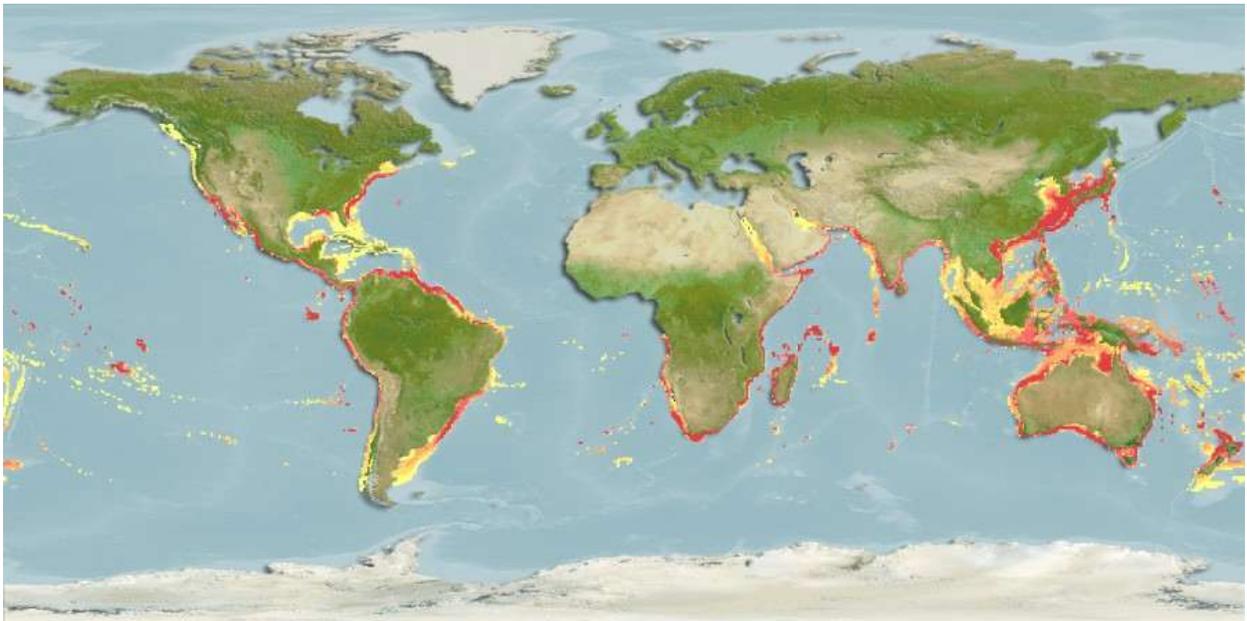
⁹ https://www.seafoodwatch.org/globalassets/sfw-data-blocks/reports/a/mba_seafoodwatch_amberjackmexico_report.pdf

¹⁰ King Kampachi webpage: <https://www.kingkampachi.mx/> (accessed 3 March, 2020). – link not currently functional, alternate source: <https://www.hatcheryinternational.com/mexicos-the-king-kampachi-sets-its-sight-on-selective-breeding/>

¹¹ The Fish Site: <https://thefishsite.com/articles/double-first-for-dutch-kingfish-farm.>



*Native range of S. dumerili*¹²

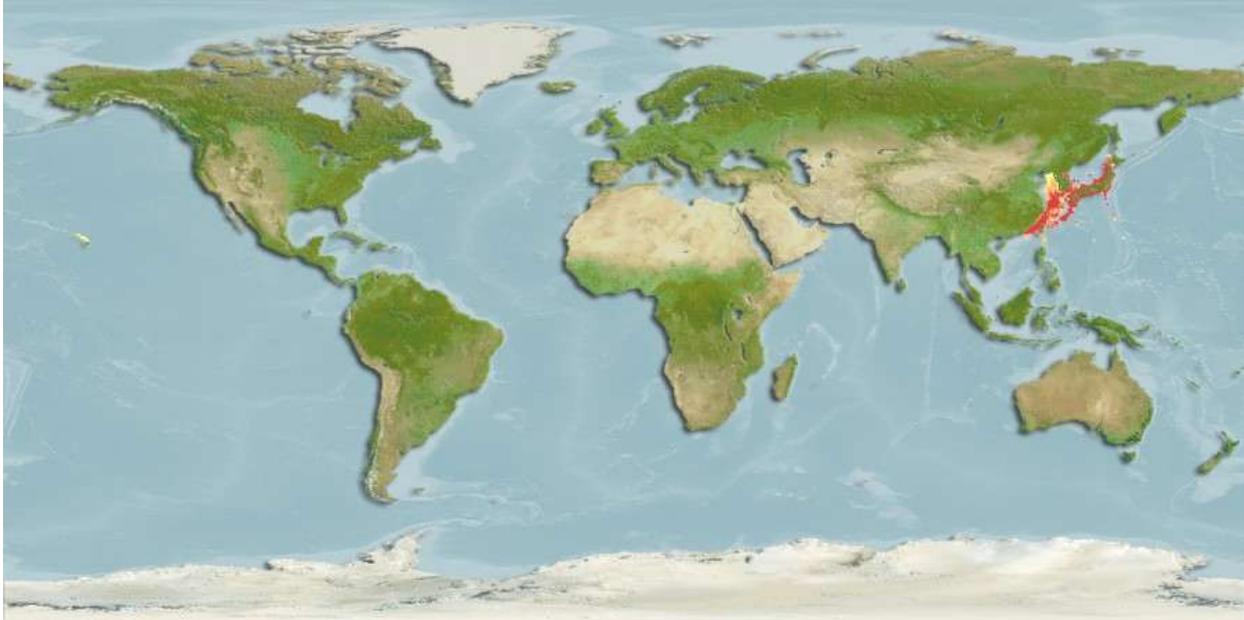


*Native range of S. lalandi*¹³

¹² Source: Fishbase website: <https://www.fishbase.se/summary/Seriola-dumerili.html>.

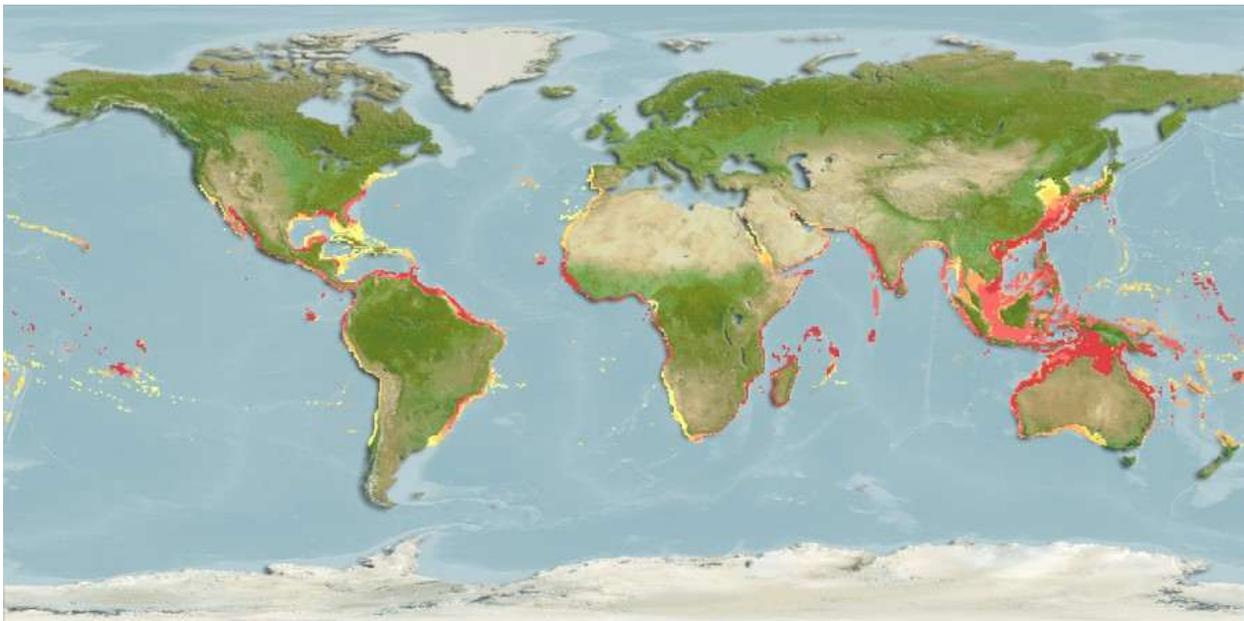
¹³ Map from Fishbase: <https://www.fishbase.se/summary/Seriola-lalandi.html>.

Seriola quinqueradiata naturally occurs in the Northwest Pacific, as shown below, including Japan and the eastern Korean Peninsula, China and Taiwan, and east to the Hawaiian Islands. As it is the main subject of *Seriola* aquaculture, it will be treated in much detail hereafter.



*Native range of S. quinqueradiata*¹⁴

Despite a wide range, *Seriola rivoliana* has been selected by only a few producers.



*Native range of S. rivoliana*¹⁵

¹⁴ Map from Fishbase: <https://www.fishbase.se/summary/381>.

¹⁵ Map from Fishbase: <https://www.fishbase.se/summary/1007>.

Connection of *S. rivoliana* to Neil Sims

I will dwell on *S. rivoliana* for a bit here because almost all of the interest in this species is connected to Neil Sims and his original work with Kampachi Farms. Companies without this connection have not selected it. Kampachi Farms, the first domestic U.S. producer of *Seriola*, originally sold this fish as “Kona Kampachi.”

A successor company, Ocean Era, continues to breed the fish, and to research feeds and open ocean pens. Ocean Era’s webpage says that it does not sell it, and refers buyers of “Hawaiian Kampachi” to Blue Ocean Mariculture’s¹⁶ Hawaii sales manager, Shaghna Wate.¹⁷ Thus, it seems that Blue Ocean Mariculture is the only current seller of the product in Hawaii. Ocean Era seems to market through Blue Ocean Mariculture.

OCEAN ERA, INC. LOVES HAWAIIAN KANPACHI, BUT WE DO NOT SELL IT.

For availability/pricing of Hawaiian Kanpachi (or any of our limu or nenu), please contact **Shaughna Wate, by phone, at 808-556-2227.**

Sims has said that *S. rivoliana* tastes like *S. dumerili*, and has a fast growth rate and good feed conversion. However, a major reason that his companies selected it is that they were able to successfully reproduce an F1 generation in the hatchery. As the company wished to market the product as sustainable, it was desirable not to depend on wild fingerlings.

Simms said in a 2019 presentation (available on YouTube¹⁸) that the species was also farmed in Japan. However, I believe that this is incorrect, as no mention of the species is made in Japanese government materials on aquaculture. A small amount of wild-caught product is sold.

Regarding challenges to the species in the U.S. market, Sims said, “Kampachi achieves high prices in sushi markets, but there is a strong market preference for larger fish (over 3 kg; requiring up to 18 months grow-out, and higher feed conversion ratios); and a market expectation that mandates expensive, high-quality feed (protein levels over 42%, lipid up to 26%).” This is particularly problematic for a farm that wants to market itself as sustainable, since a low feed conversion ratio (FCR) and low wild fish inputs (fish meal and fish oil) are metrics often used in evaluations and certifications.

Sims further said, “Given the competition from hamachi, the size of the available sushi market in the U.S. at current prices is constrained. Current prices also limit the potential penetration

¹⁶ <https://bofish.com/>

¹⁷ <https://www.linkedin.com/in/shaughna-wate-684aa217/>

¹⁸ <https://www.youtube.com/watch?v=RQ9NPknUMI8>

into other food service. Traction in retail sales is also constrained by consumers' lack of familiarity with the product, and the high price point.”

This is to say that in the U.S.A., average retail consumers do not know the difference between the various species of *Seriola* and do not understand why kampachi or hiramasa should cost more than hamachi. Even as Sims points out the need for such education, he conflates “hiranaga kampachi” with “kampachi.” In fact, *S. rivoliانا* is not well known in Japan, so references to its preparation or use in Japan in the marketing of *S. rivoliانا* are actually about *S. dumerili*.

Ocean Era was also pursuing an open-ocean pod demonstration project in the Gulf of Mexico, named the Velella Epsilon.¹⁹ It applied for a permit to culture a single cohort of *S. rivoliانا* offshore of Sarasota, Florida.²⁰ The company initially proposed the project in 2017. The U.S. Environmental Protection Agency (EPA) made a final decision to issue a National Pollutant Discharge Elimination System permit to Ocean Era almost five years later, on June 8, 2022.



An Ocean Era open-ocean pod

The long delay highlights the difficulty of obtaining permits for ocean aquaculture in the United States, which is one of the drivers for land-based projects in the U.S.A. This is also the reason

¹⁹ All related EPA documents: <https://www.epa.gov/npdes-permits/ocean-era-inc-velella-epsilon-aquatic-animal-production-facility-national-pollutant>

²⁰ Environmental Protection Agency Fact Sheet: https://www.epa.gov/sites/default/files/2020-10/documents/fact_sheet_-_ocean_era_inc_-_velella_epsilon_fl0a00001.pdf

producers for the Los Angeles market have chosen to locate in Baja California, Mexico, as can be seen in a footnoted report on efforts to site farms offshore in California.²¹

Florida locals oppose the Vellela Epsilon project on various grounds, including impacts from red tide, water contamination from fish waste, fish escaping the pens and impacting wild stocks, hurricanes, the use of antibiotics, and impacts on the environment and marine life.

The project was permitted to culture a single cohort of approximately 20,000 fish, which were to be reared for approximately 12 months. The estimated final fish size was approximately 2 kilograms. The total annual harvest weight was estimated to be less than 40 MT, based on a 90% survival rate.

However, a July 2023 news report from the local area²² said that the company had switched its target fish to red drum. In a statement, the company said that red drum “offers much more market opportunity” in the U.S., because the market already faces competition from three existing offshore kampachi farms, whereas red drum—typically farmed in open ponds in Texas—has faced deep freezes, harming production.²³

Those three farms may include another farm that Sims is involved in, Omega Azul, in Baja California Sur, Mexico, which aimed to sell its “Baja Kampachi” brand into the Los Angeles market. The company was formerly named “The Kampachi Company” and the product was branded as “King Kampachi” and introduced to the U.S. market at Seafood Expo North America (SENA) in Boston in March 2019. It saw its U.S. market dissipate with the closure of restaurants because of COVID-19.

In response, production was reduced to the minimum viable level and sales were restricted to Mexico. The company has kept production going with the lowest effort to maintain profitability and has added shrimp to its line-up.

“Harvests are now processed and frozen,” said hatchery manager Mauricio Moreno in a 2020 interview. “We have to find that market for frozen fish. Our CEO is looking really closely at the local market, which could be a main market for us, not just fancy restaurants but also households. We are finding that the Mexican market looks really accepting of really good final product,” he said.²⁴

It can be assumed that the company is trying to re-enter the U.S. market following the reopening of restaurants. However, the operation has also suffered from skin fluke

²¹ https://www.aquariumofpacific.org/images/mcri_uploads/aquacultureforumrpt.pdf

²² <https://www.abcactionnews.com/news/state/wild-vs-farmed-debate-surrounds-proposed-fish-farm-off-coast-of-sarasota>

²³ <https://www.seafoodsource.com/news/aquaculture/ocean-era-plans-species-change-for-florida-fish-farm-environmental-groups-cry-foul>

²⁴ <https://www.hatcheryinternational.com/mexicos-the-king-kampachi-sets-its-sight-on-selective-breeding/>

(*Neobenedenia girellae*) infestations. While the hatchery is an RAS system, grow-out is in ocean cages.

Differences in quality

In Japan, *S. rivoliana* is not well known, so I exclude it from the discussion about Japan, though it could be said to resemble kampachi in quality. In the U.S., it is sold as kampachi. The qualities of the three main *Seriola* species are as follows.

Fish name	Texture	Taste
Buri	Melts in your mouth	Fatty
Kampachi	Springy	Light
Hiramasa	Firm	Clean

Taste and texture comparison of Seriola species

There are important quality factors other than species. The fish are sold in live, fresh, and frozen forms, with pricing in that order. For exports, there is a trend away from airfreighted fresh product toward frozen product transported by sea, corresponding with improved freezing technologies that reduce drip in thawed product.²⁵ For example, Kurimoto Suisan introduced a CAS (Cells Alive System) freezing system in 2018.²⁶ Some processors are also employing liquid cooling freezers using alcohol.²⁷ It is also possible that most of the growth in Japanese restaurants has been for mid-range rather than high-end restaurants.

Discoloration of the bloodline is a main consideration in judging quality, and various methods are taken to prevent this. In Japan, feeds containing antioxidants made from by-products of local tea or citrus production are a popular sales points and a way to differentiate by production area.



²⁵ <https://www.nippon.com/en/people/e00180/>

²⁶ <https://kuramoto-suisan.co.jp/en/company/>

²⁷ <https://www.seafoodsource.com/news/premium/processing-equipment/new-liquid-freezer-dubbed-food-time-machine-uses-vibration-to-keep-fish-fresh>

A crossbred fish, named “burihira,” was developed by Kindai University in 2017 and its production has been increasing. Burihara is the offspring of a female buri a male hiramasa. Target sales volume in 2023 was 80,000 fish. The Besia supermarket chain sold “saku” loin blocks weighing 100 grams for JPY 537 (USD 3.81, EUR 3.49 in 2023). The fish’s feed contained acerola as an antioxidant.²⁸ The developers and distributor said that buri is fatty, with a rich umami flavor. However, its meat is soft, and the dark muscle portion of the fish tends to discolor quickly. Hiramasa, meanwhile, is lean, has a light taste with a crisp texture, and is more resistant to discoloration. The crossbred burihira combines the rich taste of buri with the crispness and color retention of hiramasa.

In a personal interview with the head of the Aquaculture Stewardship Council (ASC) in Japan, he said that there is a recent trend away from finishing on raw feeds toward using only pelleted feeds, as the high oil content that gives a rich flavor also leads to earlier discoloration.

Differences in price by species

Japan is by far the leading aquaculture producer of *Seriola* species, harvesting approximately 130,000 metric tons (MT) in 2022.²⁹ The Japanese market also sets the benchmark prices. Japanese production is stable, due to caps on the stocking of fingerlings, instituted to stabilize prices rather than to conserve the wild fingerlings (called *mojako*), which are usually sufficient and are harvested at a sustainable rate. An exception was 2021, when low algae levels resulted in a poor *mojako* harvest.³⁰ Some fingerlings were imported. The shortfall may have some relation to higher sales prices in late 2022 and early 2023—though high feed prices and the end of COVID-19 measures may also have contributed.

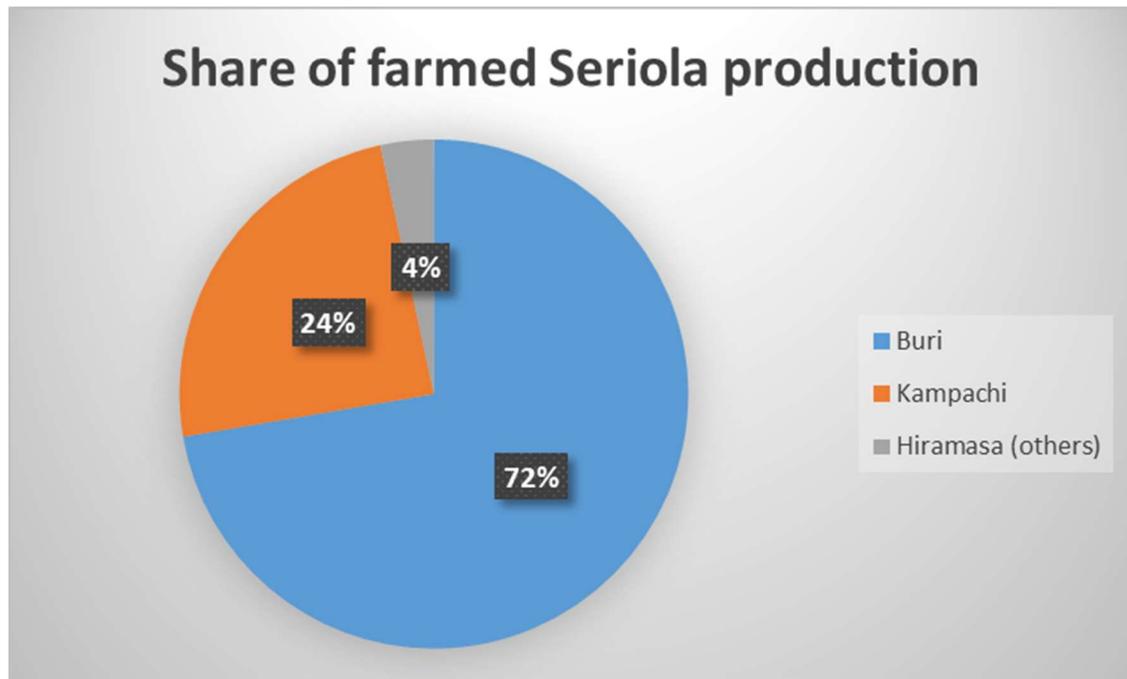
Prices in Japan of the three main species not only reflect their qualities and consumer preferences but also the relative production of each. Buri is the most important in aquaculture production in Japan (at 99,952 MT in 2018), followed by kampachi (33,612 MT), and hiramasa (4,665 MT), which is included in “others” in Japanese government data on *Seriola*.³¹

²⁸ <https://www.seafoodsource.com/news/premium/supply-trade/demand-for-yellowtail-tuna-crossbreed-continues-to-climb-in-japan>

²⁹ (From MAFF FY2022 Trends in Fisheries / FY2023 Fisheries Policy Summary <https://www.maff.go.jp/e/data/publish/attach/pdf/index-220.pdf> (accessed March 8, 2024))

³⁰ <https://www.seafoodsource.com/news/supply-trade/yellowtail-fingerling-shortfall-gives-urgency-to-japan-s-closed-cycle-breeding-efforts>

³¹ MAFF: Census of Fisheries



Shares of farmed Seriola production in Japan by species, fiscal year 2018.

Buri, kampachi and hiramasa are distinct in the Japanese market. Each is sold under its own name and each has its own price point relative to the others with hiramasa highest, followed by kampachi, and then buri, reflecting their relative quantities of farmed production. However, they are sometimes lumped together in government statistical data under *huri-ryui* (yellowtail family).

Daisuke Yamasaki, Subsection Chief, Sales Section of The Nagasaki Fisheries Cooperative Association, said in a 2020 interview that a 1.5-kilogram hiramasa fillet would wholesale in the range of JPY 2,500 to 3,500 per kg (USD 23.42–32.78, EUR 20.93–29.30 at the time). Buri in the same form would sell at around JPY 1,500 (USD 14.05, EUR 12.56). Kampachi prices would fall in the middle of the two. The price of hiramasa is more closely tied to the price of kampachi than to that of buri, according to Yamasaki. Prices were not strongly influenced by the wild catch, he said, since farmers can time their harvest by reducing or increasing the feed.³²

While it might seem to make more sense for Japanese fish farmers to concentrate on the highest-priced species, there are reasons for the current mix. Hiramasa require warmer water temperatures than the other two species, so they are farmed mainly in Kagoshima, at the southern end of Kyushu Island. While the price of kampachi has also been consistently higher than buri, the profit is not necessarily higher, as survivability is poor in comparison, due to less disease and parasite resistance. The comparative feed conversion depends on water temperature. In fact, annual kampachi production has dropped by about 5,000 MT since around

³² [“Hamachi, kampachi, hiramasa still popular in Japan,”](#) Chris Loew, SeafoodSource.com, March 26, 2020.

2015, being partially supplanted in the farming mix by bluefin tuna. (Red sea bream is also commonly farmed in the same areas as buri, allowing some mitigation of market risk.)

The Aquaculture Network (ACN) report of September 2021 supplies the following two graphs which show the price (chilled, HOG) at the Tokyo Wholesale Markets of buri and kampachi for a direct price comparison.³³ It can be seen that for most of the period, farmed kampachi obtained a premium over farmed hamachi. For example in July of 2019, kampachi sold slightly above JPY 2,100, while hamachi sold at slightly above JPY 1,300. The steep decline of kampachi in the fall of 2020, which had it selling below the price of hamachi for a time was due to producers clearing out overstocked ponds, possibly due to COVID-19. The timing may be related to slower growth when overwintering.³⁴



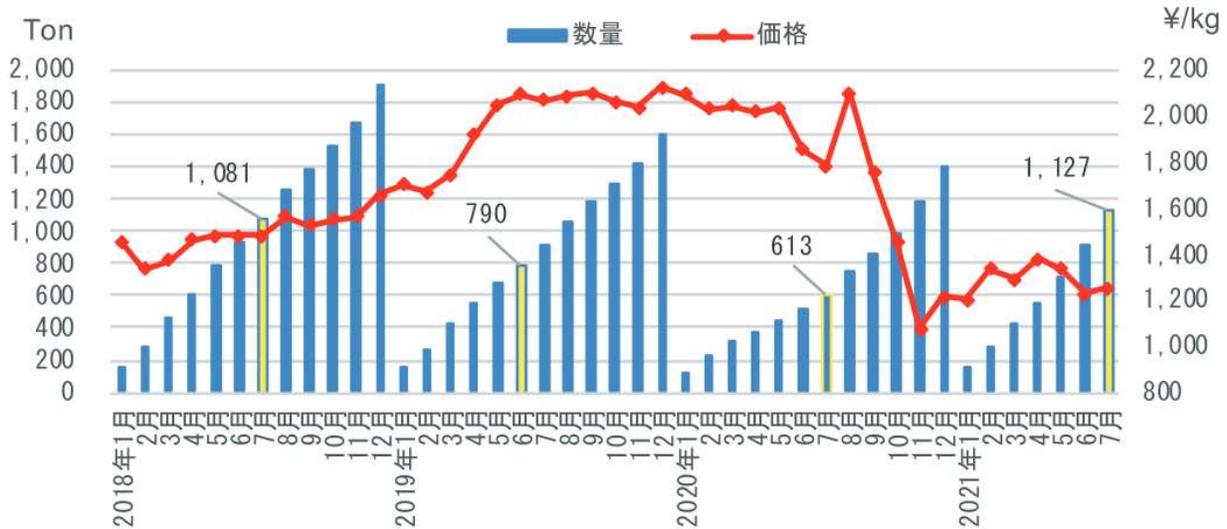
資料：東京都中央卸売市場（全場） 鮮魚／ぶり類／はまち（養殖）（図中の数字は毎年1～7月の累計取扱量）

From the Tokyo Central Wholesale Markets (all auction locations), chilled farmed buri/hamachi. Numbers highlighted in the graph are the cumulative sales through July of each year. The bars show cumulative sales in MT (vertical scale at left) for each month and the red line shows the price (vertical scale at right). The form is HOG.

³³ <http://www.acn-npo.org/news/pdf/no55.pdf>

³⁴ <https://www.minato-yamaguchi.co.jp/minato/e-minato/articles/112435>

図9 東京都中央卸売市場 カンパチ鮮魚（養殖）の取扱数量と価格



資料：東京都中央卸売市場（全場） 鮮魚／ぶり類／かんぱち（養殖）（図中の数字は毎年1～7月の累計取扱量）

From the Tokyo Central Wholesale Markets (all auction locations), chilled farmed kampachi. Form: HOG.

More recently, the auction price at Tokyo’s Toyosu on March 25, 2024 of fresh hamachi from Ehime Prefecture and Kagoshima Prefectures (major farming prefectures) ranged from a high of JPY 1,080 (USD 7.14, EUR 6.60) to a low of JPY 972 (USD 6.42, EUR 5.94), with an average of JPY 1,026 (USD 6.78, EUR 6.27). A total of 17,904 kg was sold. Sizes were mainly 5-6 kg per fish.

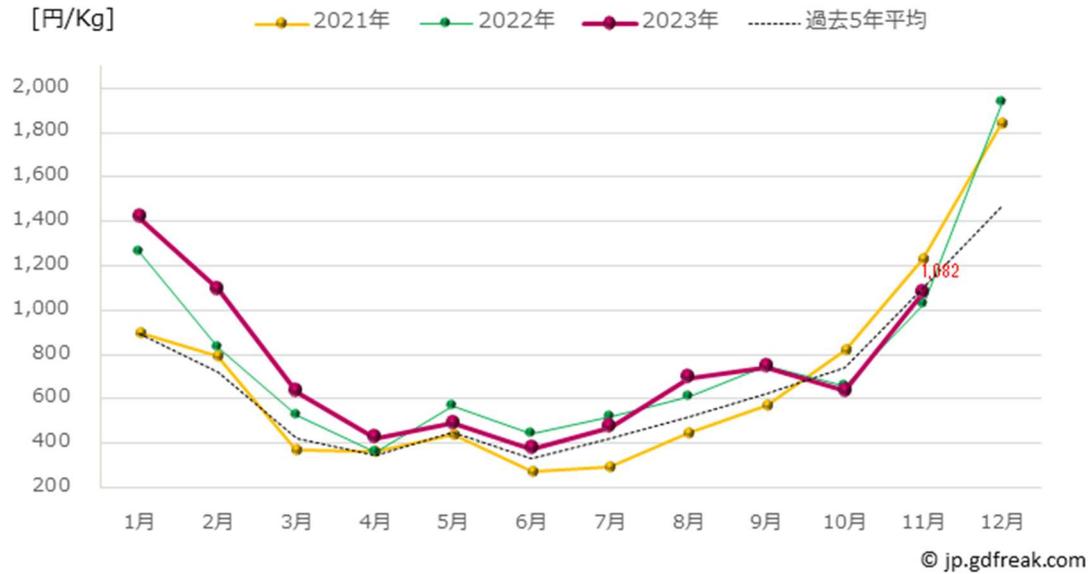
On December 28, 2023, just before the peak year-end holiday, the same product ranged from a high of JPY 1,188 (USD 7.86, EUR 7.26 at current exchange rates), a low of JPY 1,080 (USD 7.14, EUR 6.60), and an average of JPY 1,134 (USD 7.50, EUR 6.93). A total of 47,995 kg were sold ³⁵

Another visualization of price data from the Toyosu market is charts created by the data charting site GD Freak!. While the market gives three prices (high, average, low), I believe this data is only the average of the high price for each month. It shows the strong variation in the wild price, as landings are quite variable, in contrast to the fairly steady trends of farmed hamachi and kampachi. The the form for these prices is head-on gutted (HOG).

³⁵ https://www.shijou-nippo.metro.tokyo.lg.jp/SN/202312/20231228/Sui/SN_Sui_Toyosu_index.html

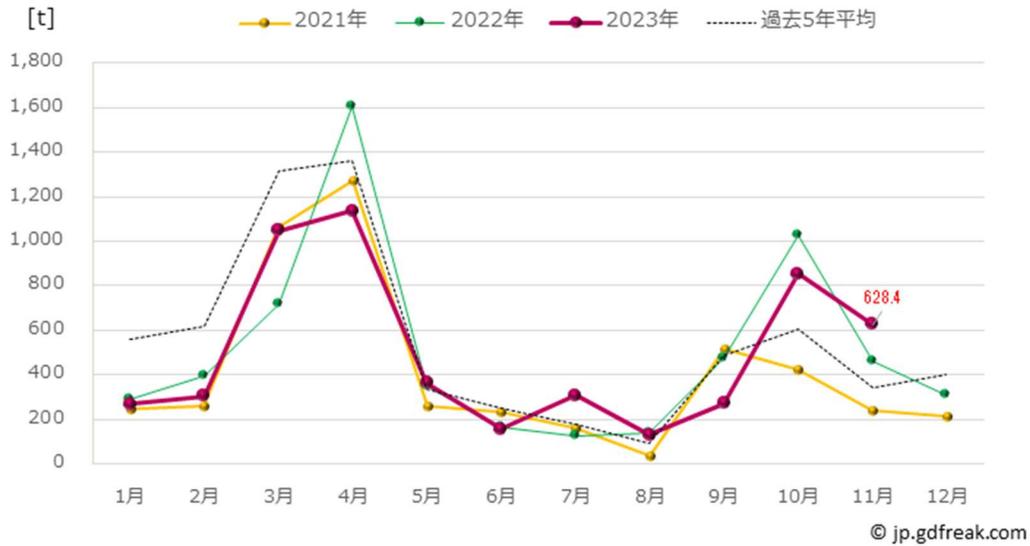
Market Conditions for Wild Buri at Toyosu Market (monthly report)

ブリの月別平均卸売価格



Value in JPY per kilogram for mature *S. quinquerediata* ("buri"), calendar years 2021, 2022, 2023, and 5-year average. Toyosu is the central wholesale market in Tokyo and sets the benchmark wholesale price. Size and quality are better in the fall and winter. Source: [GD Freak!](#)

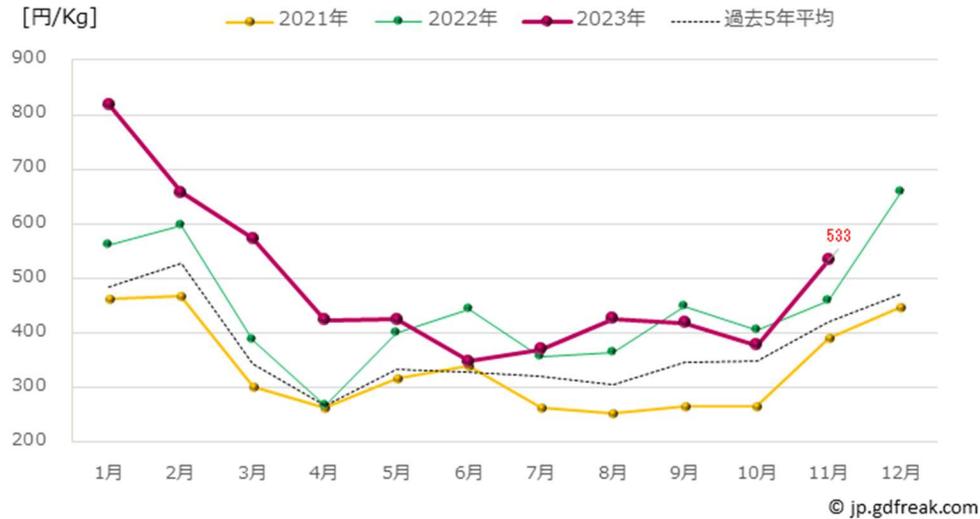
ブリの月別卸売取扱数量



Volume of wild buri handled at Toyosu, in metric tons per month. Source: [GD Freak!](#)

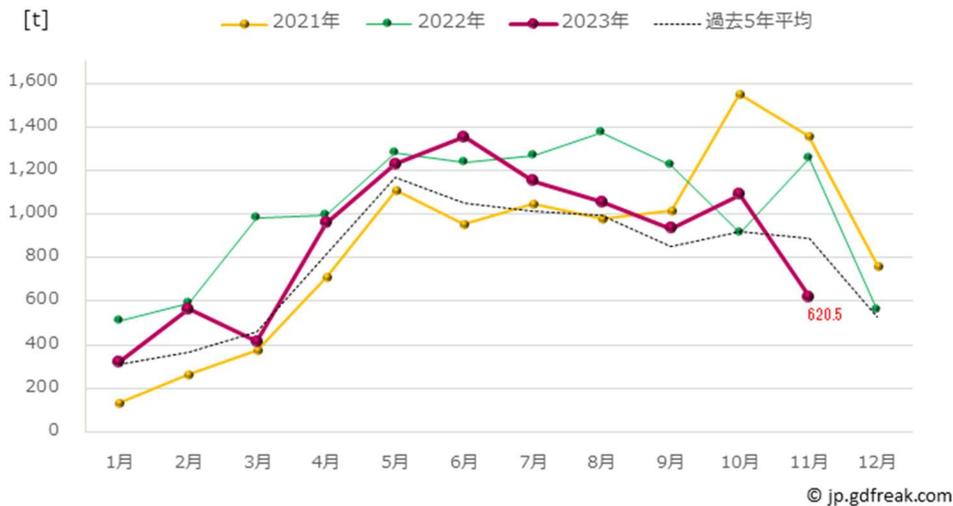
Market Conditions for Wild Warasa (juvenile yellowtail) at Toyosu Market (monthly report)

ワラサの月別平均卸売価格



Value in JPY per kilogram for juvenile *S. quinquerediata* (warasa), calendar years 2021, 2022, 2023, and 5-year average. Source: [GD Freak!](#)

ワラサの月別卸売取扱数量



Metric tons of warasa handled per month at Toyosu. Source: [GD Freak!](#)

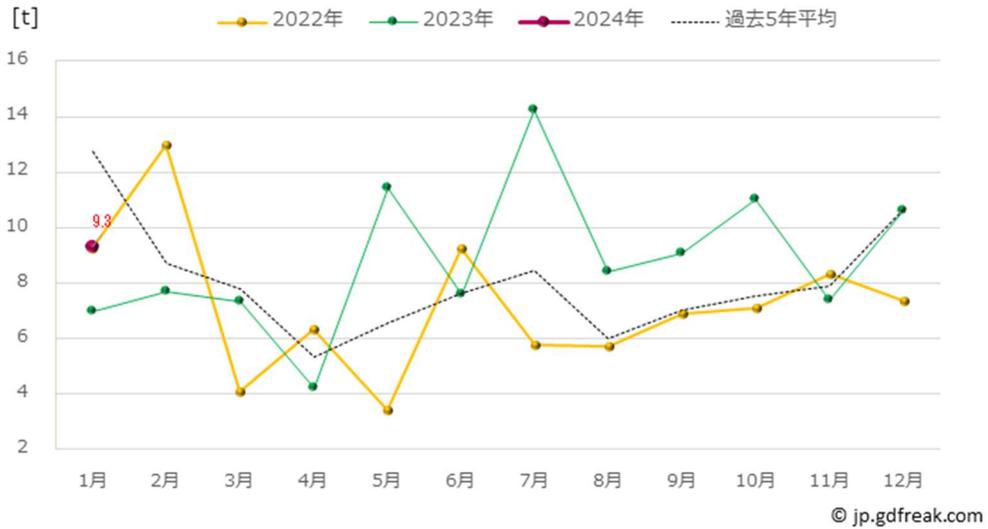
Market Conditions for Frozen Wild Buri at Toyosu Market (monthly report)

冷凍ブリの月別卸売平均価格



JPY per kg. Source: [GD Freak!](#)

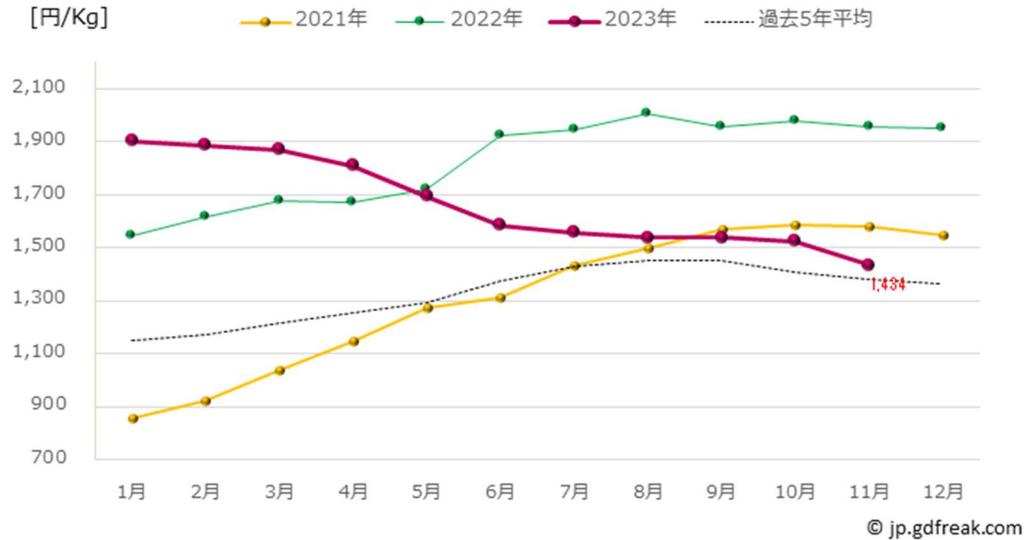
冷凍ブリの月別卸売取扱数量



Volume handled at Toyosu, in metric tons. Source: [GD Freak!](#)

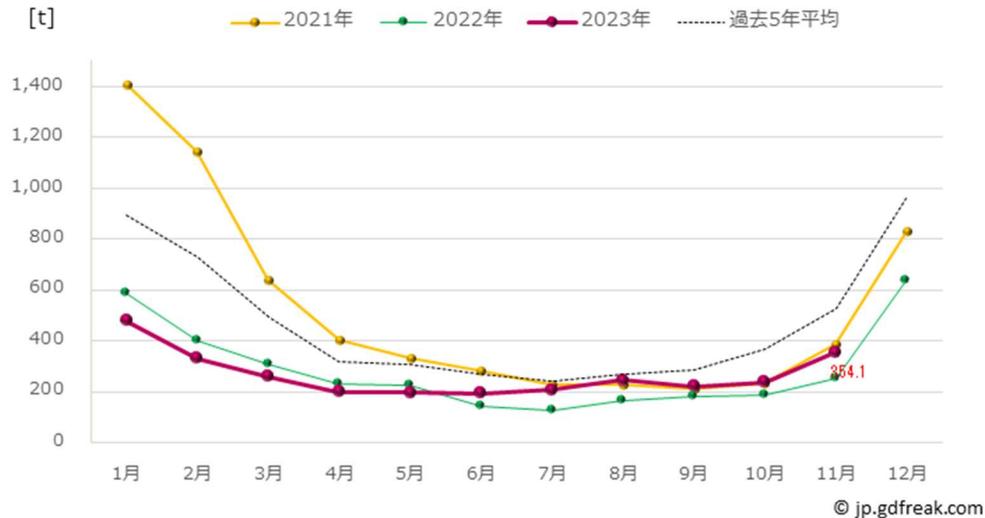
Market Conditions for Farmed Hamachi at Toyosu Market (monthly report)

養殖ハマチの月別平均卸売価格



Price in JPY per kg. Farmed *S. quinquerediata* (buri) is called “hamachi” in Toyosu’s price reporting. This can be confusing, as this word is also applied to young wild yellowtail in the Kansai (Osaka, Kobe, Kyoto) area of Japan. Hamachi is also the name usually used at sushi shops. Source: [GD Freak!](#)

養殖ハマチの月別卸売取扱数量



Amount of farmed hamachi handled at Toyosu, in metric tons. Source: [GD Freak!](#)

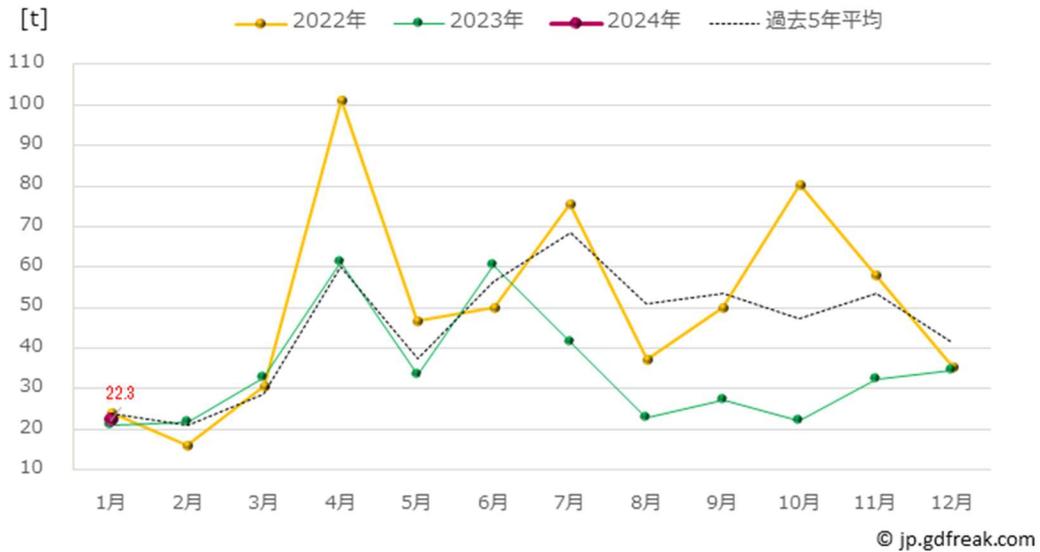
Market Conditions for Hiramasa at Toyosu Market (monthly report)

ヒラマサの月別卸売平均価格



S. lalandi, calendar years 2021, 2022, 2023, and 5-year average. The relatively low prices and wild fluctuations indicate that it is for wild, with an assortment of sizes, including smaller fish that would bring the average price down. Farmed hiramasa is usually higher priced than farmed hamachi. Source: [GD Freak!](#)

ヒラマサの月別卸売取扱数量



For *S. lalandi*, volume handled at Toyosu in metric tons sold per month. Source: [GD Freak!](#)

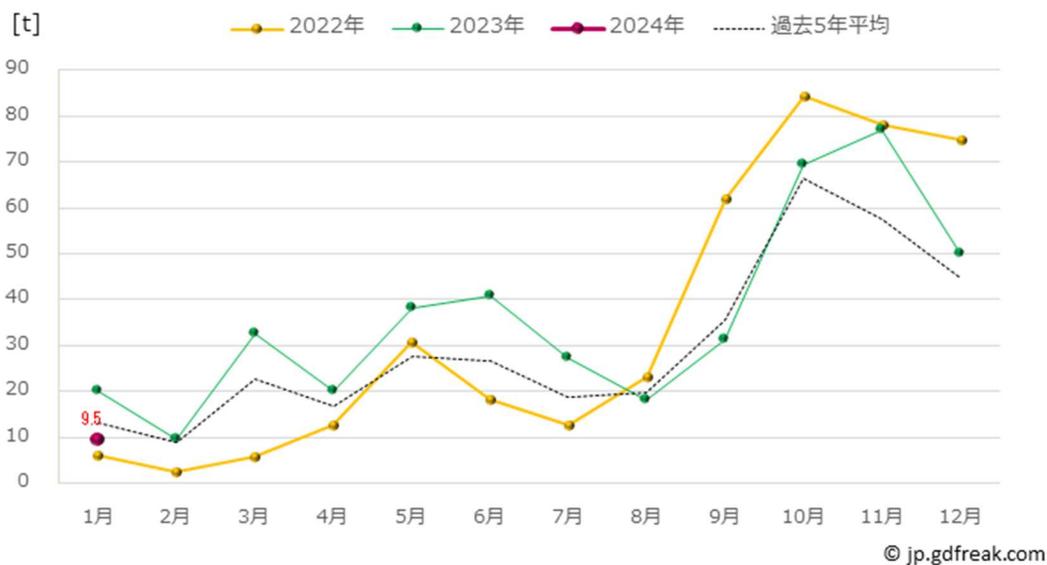
Market Conditions for Wild Kampachi at Toyosu Market (monthly report)

カンパチ（天然）の月別卸売平均価格



Prices of *S. dumerili* (kampachi). Source: [GD Freak!](#)

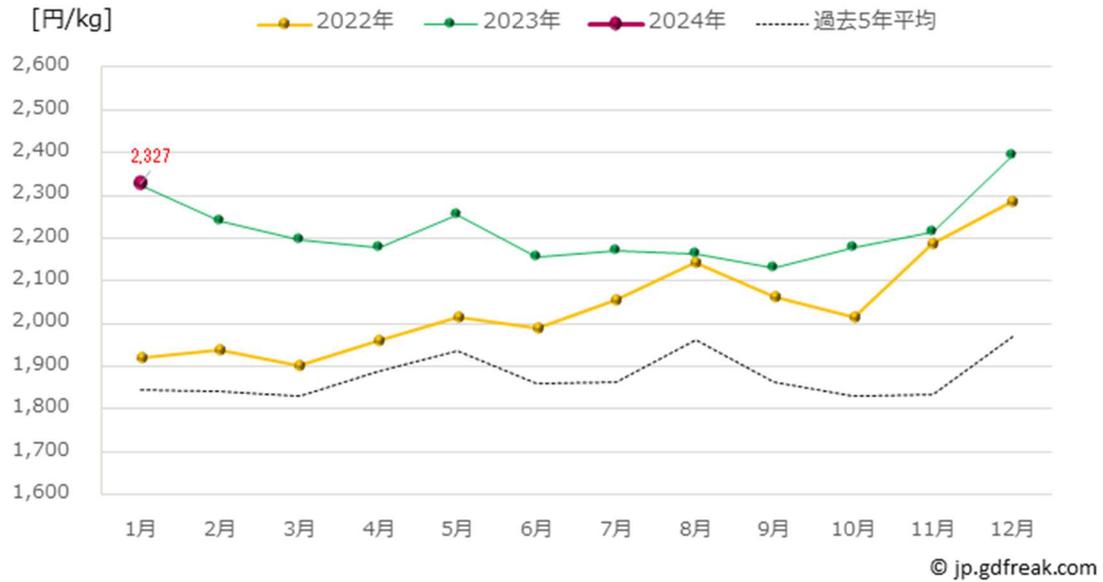
カンパチ（天然）の月別卸売取扱数量



Volume of *S. dumerili* sold at Toyosu market. Source: [GD Freak!](#)

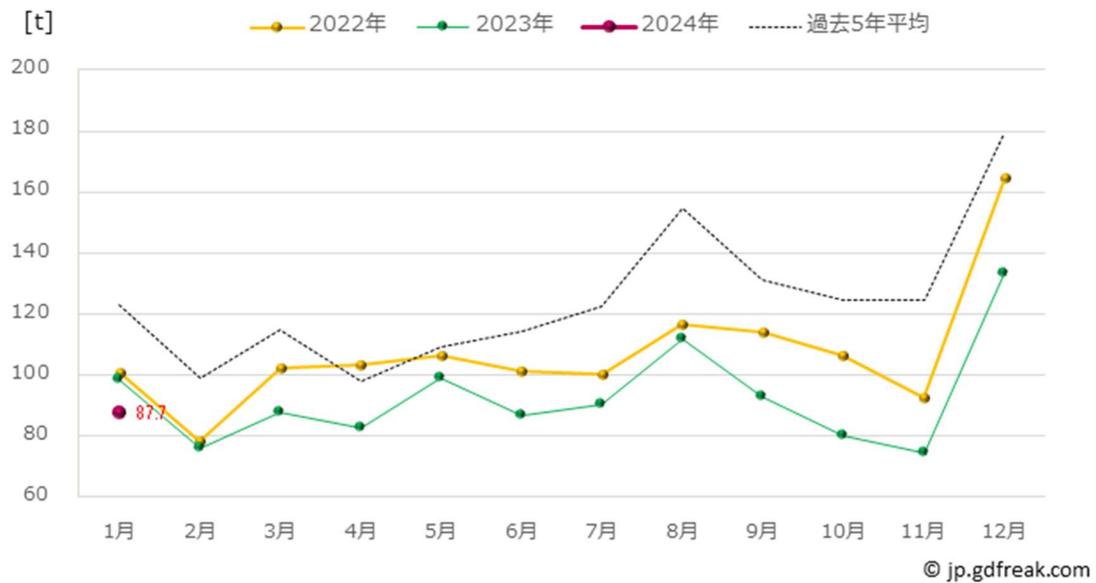
Market Conditions for Farmed Kampachi at Toyosu Market (monthly report)

カンパチ（養殖）の月別卸売平均価格



Prices in JPY per kilogram. Source: [GD Freak!](#)

カンパチ（養殖）の月別卸売取扱数量



Metric tons of farmed kampachi (*S. dumerili*) handled at the Toyosu market. Source: [GD Freak!](#)

Reference Table for Farmed *S. dumerili* Wholesale Prices

Transaction Date	2022	2023	2024	Average over the past 5 years
January	1,921	2,322	2,327	1,846
February	1,940	2,241	-	1,841
March	1,903	2,194	-	1,832
April	1,962	2,176	-	1,890
May	2,014	2,253	-	1,936
June	1,988	2,156	-	1,861
July	2,056	2,171	-	1,864
August	2,144	2,163	-	1,962
September	2,063	2,131	-	1,864
October	2,014	2,179	-	1,830
November	2,185	2,213	-	1,834
December	2,285	2,395	-	1,969

Note that "Wholesale prices" include consumption tax (8% for food in Japan).

*As the price/kg for farmed *S. dumerili* is the most relevant data, I also include the reference table above for the price chart. Source: [GD Freak!](#)*

In addition to the Tokyo Central Wholesale Markets, another benchmark for hamachi and kampachi is the “beach price” from the Kagoshima producers. This tends to be lower than the Tokyo Central Wholesale Market prices. It is not clear if the form is the different (in the round, HOG?) or whether the difference represents dealer commissions, transport and handling, and sales tax that would be added in the case of the Tokyo markets. For that reason, I would not recommend trying to make direct comparisons.

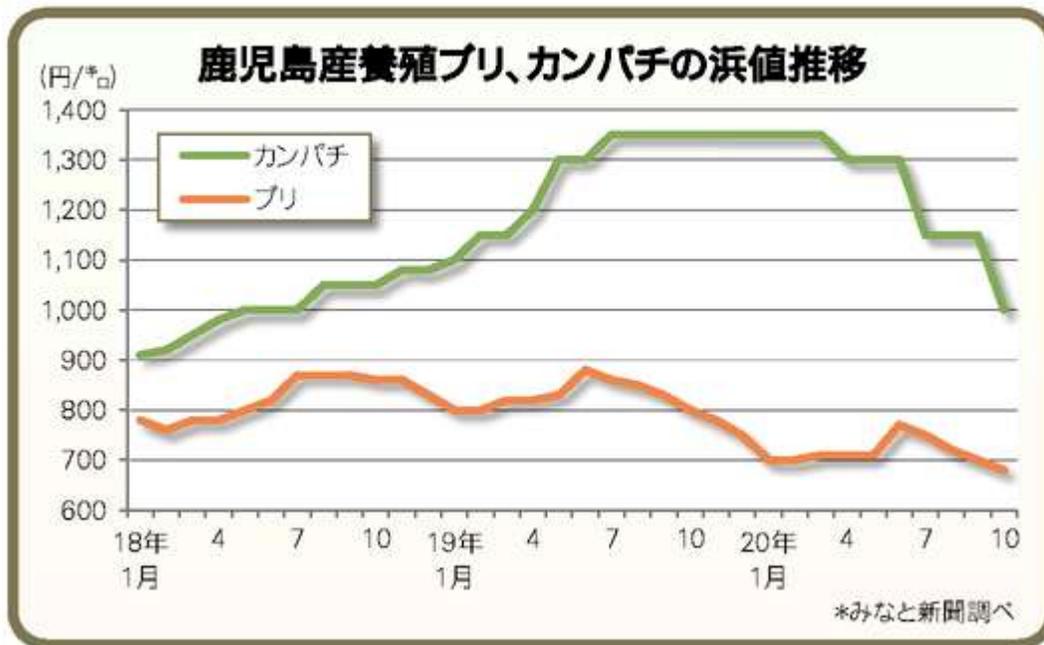
It may be said that the price at the Tokyo Market is what a distributor in Tokyo would pay, while the Kagoshima price is what a producer would receive (similar to a “farm gate” price in agriculture). However, both can be used to see the price trend.

The fishery newspaper Minato Shimbun reported on March 22, 2024 that the landed price of farmed kampachi in Kagoshima increased by 50 yen from early March, to 1,500 yen.³⁶ The landed price in Kagoshima for hamachi in early March was reported as 830 yen, which was described as a “sluggish” price.³⁷

³⁶ <https://www.minato-yamaguchi.co.jp/minato/e-minato/articles/141272>

³⁷ <https://www.minato-yamaguchi.co.jp/minato/e-minato/articles/140825>

The price spread between hamachi and kampachi in 2018 to 2020 is shown in the chart below. Notably, it is not constant, either as a fixed premium or as a percentage, but fluctuates according to the supply conditions of each, which may be affected by mortality events (disease, parasites, red tides) or unfavourable weather conditions (extreme heat or cold) that slow the growth. There is not a strong substitution effect, except when the prices are close. The prices of hiramasa and kampachi have a stronger relation, though price data reporting for hiramasa is often mixed with wild due to the lower quantities sold.



Kagoshima-farmed buri and kampachi landed “beach prices” Jan. 2018 to Oct. 2020.

Uses of *Seriola* species

The use of the farmed fillets is similar for all three *Seriola* species in Japan—mainly sushi and sashimi. It is also used in carpaccio or to top a salad, which would then often be dressed with balsamic vinegar and olive oil.



Kampachi carpaccio and kampachi salad.

Buri is sometimes eaten as *huri-shabu*,³⁸ by dipping thin slices in boiling water; as *nitsuke*,³⁹ by boiling in a sweet soy-sauce-based sauce; or made into *huri-daikon*.⁴⁰ The latter two dishes are in the form of steaks.

Kampachi and hiramasa are not as commonly sold for cooked applications as they have less fat and so would tend to become drier than hamachi. Kampachi seems to be popular for raw dishes that use olive oil (carpaccio, salads with vinaigrette dressing), as it is naturally less oily/fatty than hamachi. Kampachi and hiramasa seems to be better suited to aging, which is a recent trend.

The Kagoshima-based company Plow A Land Inc. uses kampachi in preparations and dishes using olive oil.⁴¹ In Japan, local specialty foods are often bought as seasonal gifts or souvenirs.

³⁸ <https://local-cuisine.maff.go.jp/en/recipe/4261/> (Accessed March 15, 2024.)

³⁹ <https://www.japanesecooking101.com/buri-nitsuke-recipe/> (Accessed March 15, 2024.)

⁴⁰ <https://www.iustonecookbook.com/buri-daikon/> (Accessed March 15, 2024.)

⁴¹ <https://plow-a-land.com/>



Plow A Land offers aged kampachi sets with marinades or dressing.

The collars, a by-product of fillet production, are often grilled. The photo below, taken by the author, is of a kampachi collar nitsuke, from a fish farmed in Kagoshima Prefecture, sold at the upscale Chef Kawakami supermarket chain near Osaka, on March 24, 2024. The price is JPY 399 (JPY 430 with tax, which equals USD 2.84, EUR 2.62). It is doubtful that kampachi or hiramasa collars obtain a higher price than those of hamachi in the way that the fillets do.



Kampachi collar nitsuke

In the U.S. market, besides Japanese restaurants, there are several chains offering Hawaiian poke bowls. Generally, yellowfin (ahi) tuna is the main ingredient, but Blue Ocean Mariculture’s “Hawaiian Kampachi” (*S. rivoliana*) is being promoted in this form by local Hawaiian chefs.

Mass-market poke franchise chains include Pokeworks (65 outlets in 2023), Just Poké (27 outlets), Island Fin Poké Company (24 outlets), Aloha Poke Co. (14 outlets), and Poké Mahi 9 outlets).⁴² However, these do not seem to be offering *Seriola*, probably due to cost. Instead, many have added salmon, shrimp, and shellfish.

Crudo and ceviche are other dishes in which *Seriola* is sometimes used.

⁴² <https://www.franchisechatter.com/2022/09/24/the-best-poke-bowl-franchises-of-2022/>



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