

Sustainable Arcticas Spotted Wolffish

The Importance of Farming Spotted Wolffish



Wolffish are a long-lived, *boreo-arctic* species that has long been prized for its rich and tender meat. However, since wolffish take a long time to reach reproductive age, the population of wild wolffish is particularly vulnerable to overexploitation.

In fact, over the years there has been a demonstrable decline in the wild population of wolffish attributed to fishing pressures as well as climate change¹. This is why the WWF endorses the Aminor wolffish farm as an effective manner to take pressure off the wild stocks.

Spotted wolffish meat is very versatile in the kitchen. It is well suited for all types of preparations, is easy to work with, impossible to overcook and always tastes incredible. It is harvested to order and is always sashimi-grade.

Extremely Well Suited for Aquaculture

Calm, Docile & Social

- They are calm, docile and highly social.
- They do best when living in dense populations, in fact they do best when at the maximum legal density limit for aquaculture. The farm has tried to reduce the pen density but the fish responded unfavorably by changing color, refusal to eat and showing signs of wasting and stress.
- Contrary to most other animals, when the density is high, they thrive. In fact, most of the time the spotted wolffish are laying on top of each other.

¹ <https://pubmed.ncbi.nlm.nih.gov/34751448/>

Less Inputs Compared to Other Fish

- Spotted wolffish are given pelleted feed that is a mix of fishmeal, fish oil and vegetable and microalgae components. There is no soy or land animal byproduct in the feed.
- They are not greedy or fast paced feeders as they do not have a swim bladder. This means that pursuing food requires more energy than a fish with an inherent buoyancy regulator, or swim bladder.
- Feed conversion data is being gathered for all stages of spotted wolffish rearing. **Currently the FCR range goes from 0.6:1 to 1:1.**
- There is evidence that this particular species will consistently achieve less than 1:1 FCR over the entire process from hatchery to harvest, making it a prime responsible candidate for responsible aquaculture.

Disease Resistant

- Wolffish are not prone to disease or illness. They are robust and resilient.
- No medicinals are used in any part of the farming process.

Why Chefs are replacing Chilean Sea Bass with Arcticas Spotted Wolffish

	Chilean Seabass	Arcticas Spotted Wolffish	Wild Wolffish
Culinary			
Rich, Buttery			
Holds Its Shape After Cooking			
Sashimi Grade			
High Heat Friendly			
High Omega 3			
Bright White Flesh			
Crispy Skin			
Always Fresh			
Sustainability			
By-Catch Issues (Longlines)			
100% Transparency			
Prone to Overfishing	HIGH	LOW	MEDIUM
Mercury Concerns	HIGH	LOW	MEDIUM
Styrofoam-Free			

WWF

- The World Wildlife Fund (WWF) has come out with a statement that by choosing Aminor wolffish eliminate pressure on vulnerable wild wolffish stocks.
- Wolffish take a long time to reach sexual maturity and overfishing can harm the wild wolffish population.
- In the wild, wolffish are responsible for keeping certain populations in check, notably urchin and sea stars so wild wolffish play a vital role in keeping the ocean life in balance.
- **TEXT NOTE BELOW: In the UK, wolffish are referred to as Atlantic catfish, not to be confused with actual catfish which are nothing like wolffish!**

WWF recommendation:

Unregulated fishing and lack of research about stock status means that you should avoid eating catfish until there is more knowledge. The catfish species are vulnerable to overfishing because the reconstruction of the species takes a long time.

Consuming spotted wolffish from Aminor has **no influence** on the wild species



How Wolffish are Farmed

Tank structure

- The indoor grow-out tanks are 3 meters deep equipped with a “shelving” system taking up one full side of the tank. These shelves are where most of the wolffish stay all day. They lay on them piled up in a giant mass of fish. The fish that are positioned on the edge of the shelf seem to point towards the outside, looking down into the rest of the tank. This structure allows the wolffish to behave as it would in the wild where its natural habitat is in caves or rocky hiding places. The wolffish also congregate at the bottom of the tank, again laying on top of each other.

Water

- This is a tank/land based system located in the remote village of Halsa, Norway.
- Halsa is set on a deep fjord and the water is pumped to the farm from 60 meters deep. The water is consistently 4 C (39 F). The water is not treated in any way and is a flow-through system.
- Sea cages were tried during initial spotted wolffish farming experiments but the water temperature fluctuation in the sea cage was not suitable for the wolffish. They require consistently cold water all year round.

Innovation

- Aminor is the first commercial spotted wolffish farm in the world.
- They have worked with university researchers in Norway in the past but as far as commercial scale is concerned, they are the ones developing, documenting and learning the most about the spotted wolffish.
- The farm team is diligently documenting all the progress and setbacks so that they can learn and eventually expand the operation.

Broodstock

- The original broodstock were trapped in the wild at a depth of 300m. Within less than 1 week in captivity, the broodstock were being hand fed by the farmers.
- The populations are mixed, with male and female wolffish lounging together in the holding tank.
- The original population of wolffish have been at the farm for over 12 years.
- The farm is also growing a population of broodstock from their own hatchery. It takes approximately 8 to 10 years for spotted wolffish to reach sexual maturity.

Other Benefits

Harvest to Order

- Aminor harvest wolffish with a stun and bleed system.
- This process is highly regulated and the fish must be dispatched within 8 seconds of stunning.
- The fish is then immediately chilled and goes to processing.

Packing - **NO STYROFOAM!!!**

- Aminor has committed to eliminating styrofoam from the packaging for all domestic and international sales.
- They use a specially designed box that is packed with a super chilled fish, dry ice pellets and a few gel packs. This has been pioneered in Norway and will hopefully be a game changer in fresh fish packing.
- Fish packed in this manner is acceptable for “dry” trucks and mixed product delivery (i.e. other specialty goods).



Wolffish In the Kitchen

- Rich and sweet. The texture is firm but buttery at the same time.
- In the wild wolffish have only 2 to 4% intramuscular fat (as opposed to belly fat) but the farmed wolffish comes in at 8 to 11% intramuscular fat.
- This is sashimi-grade and responds well to kombu-cures, crudo, sashimi and ceviche preparations. Perfect for Yakitori too!

- The flesh is incredibly white and stays that way in cooking. It also holds together very well and doesn't easily break apart.
- When cooked, the coatings (tempura, batters, crumbs, spices, whatever) don't just slip off. It doesn't "sweat" like other white fish.
- Don't be fooled by the tough wolffish skin! The wolffish have a special layer of fat just below the surface which renders during "crispy skin" cooking techniques and produces a fine, crisp and delicious, wafer-thin crispy skin.
- The fat content, along with the fine muscular structure also makes it a very forgiving fish in the kitchen - almost impossible to overcook.
- It is also interesting to note that the fish does not have a prominent bloodline.

