

Tracing Fish From Sea To Plate

Sea bass is a highly sought-after species, prized by chefs and, in particular, the Sushi trade. In recent years, bass has increased in popularity and farmed bass has satisfied much of the growing demand. Bass landings in the UK increased from around 720 tonnes in 2011 to over 1,000 tonnes in 2014. Sea angling, illegal fishing, and changes in sea temperature have also put increasing pressure on the species in recent years, and bass is now classified as a very high-risk species. In 2014, the UK government formally requested a suite of emergency measures to protect bass stocks in some UK waters.

The new conservation measures include a ban on pelagic trawling and drift netting for bass, new MLS, limits to landings caught using lines, and limits to bass caught by recreational anglers. Bass is a

high value species, so although landings make up a relatively small proportion by weight, they can provide a significant proportion of income for some fishing businesses. The new conservation measures are a serious worry for fishermen who depend on bass for a large part of their income, especially where restrictions on other species are also in place.

UK commercial bass fisheries are now almost wholly restricted to line-caught methods, and even that is subject to catch limits and seasonal closures. The remaining fleet that can still target this species are largely classed as small-scale, artisanal fisheries. The Welsh bass fleet is one such small-scale fishery that has been working closely with scientists and the government, to come up with solutions to help them cope with the new measures. *Quay Issues* caught up with

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some of the people involved to find out about the project.

In 2015, before the new regulations were brought in, the Welsh bass fleet was made up of 85 vessels, almost one-third of all Welsh vessels. The Welsh bass fleet consisted of small vessels, with an average length of 5.7m, mostly fishing out of ports in southwest Wales.

Bass was the main target species for those vessels, making up 90% of their total fishing income, with the remaining 10% from red mullet, thornback rays and mackerel. In 2015, the Welsh bass fleet landed 61 tonnes of bass, worth nearly £460,000. Bass landings by those vessels made up 8% of the UK's total bass landings.

The Welsh bass fleet was classed as a small-scale, artisanal fishery. Many of the vessels in that group were also classed as low activity, meaning their fishing income was less than £10,000 per year. Bass is a seasonal fishery, and many of the fishermen in that group supplemented their income with another job during low season.



Before the new conservation measures were introduced, the Welsh bass fleet used only rod and line and drift/fixed nets to catch bass. These are both classed as low-impact fishing methods because they are highly selective.

In April 2016, The Welsh Fishermens Association (WFA - CPC) in partnership with Succorfish launched a six-month pilot project to test different fish tagging methods. The main aims of the project were to test if fish tagging could enhance supply chain traceability, restrict the access to commercial markets for illegally caught fish, and provide more data on the bass stock to inform management. To ensure that the solutions were practical for fishermen, six Welsh fishermen became involved in the project to test different tags. Tom Rossiter, Head of Marine at Succorfish, explained that: "Fishermen went out and used a number of different tagging systems to find the ones that would work most effectively – essentially to test which were the best solutions for them."

Fishermen involved in the project tested three different tagging systems, as Tom explained: "The most popular option was the lowest cost, but there was also a time element involved in that it took time for fishermen to sort the tags prior to going to sea into bundles of 10 to deploy when needed. None of the options were perfect for everyone, but each had merits and we took feedback from the fishers to develop them."



Tags are attached to the bass after they were caught.

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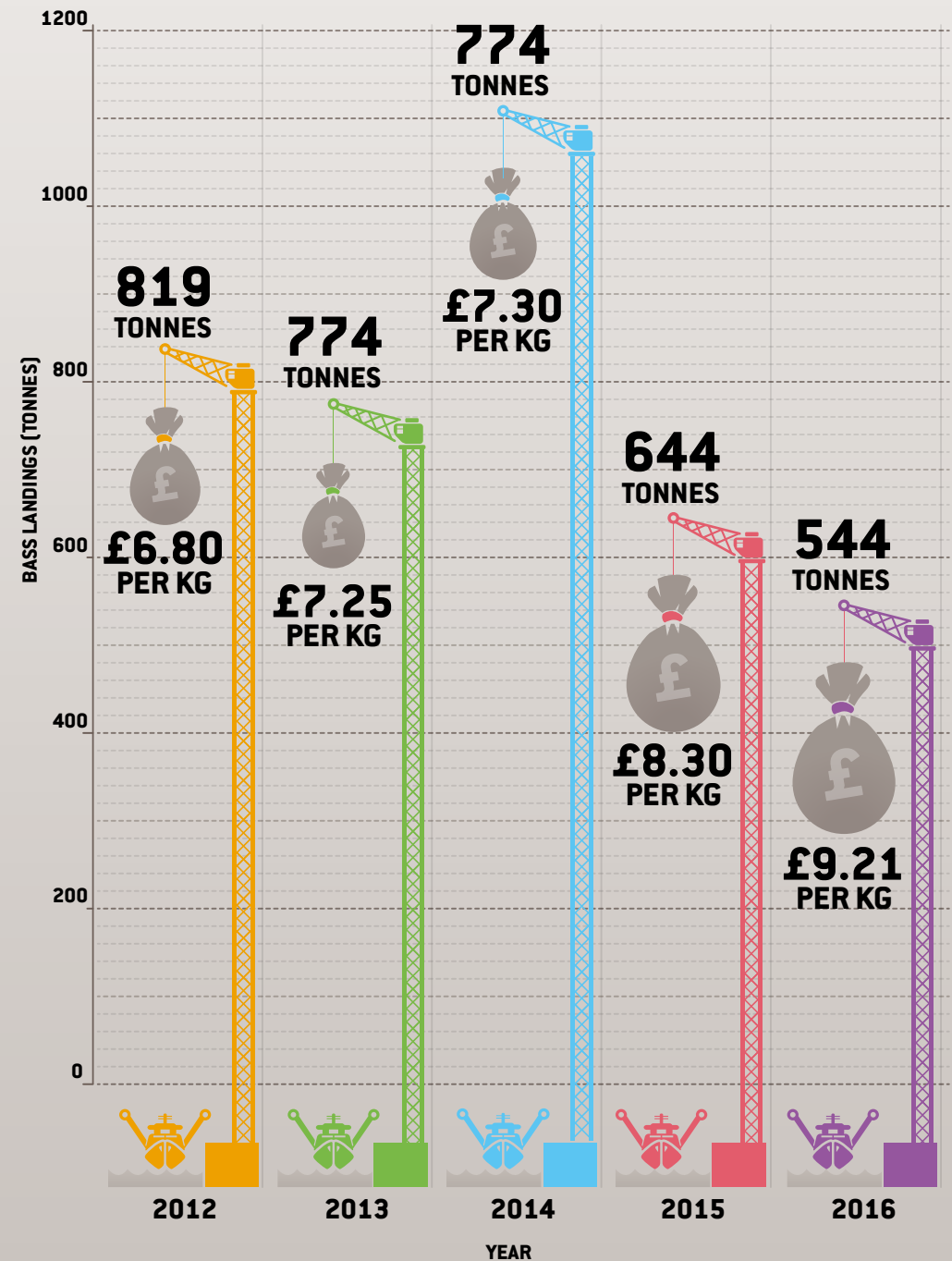
The carcass tags used for bass are very similar to those used in the agricultural industry to trace the movement of live animals and carcasses throughout the supply chain. The tags are applied to fish once caught, and each one has a unique serial number.

"The serial numbers from tags are entered into the Succorfish Catch App along with other catch data to provide full traceability," said Tom. "Further down the supply chain, the

serial numbers can be checked against data collected through the Catch App, so that buyers can confirm it is legitimately caught, and can find out where it was caught, when, and by whom. Fishermen can use the Catch App on its own to record data on fish catches, but it's most useful alongside the tags because they help to provide full supply chain traceability."

The tagging system involves additional time and cost for fishermen, however, there were

UK BASS LANDINGS AND AVERAGE PRICE PER KG 2012-2016



SOURCE: MMO, 2017. UK SEA FISHERIES ANNUAL STATISTICS 2016.

benefits too, as Tom explained. “One of the major incentives for fishermen to participate in this project was that the merchant involved was willing to pay a premium for the fish, because it can be fully traced down the supply chain, and the merchant has all the evidence he needs to prove the provenance and freshness of the fish.”

With provenance becoming more and more important in seafood supply chains, there is growing demand among leading restaurants for high-quality, fresh fish. The data linked to the serial numbers on the tags ensure that buyers further down the supply chain can make confident purchases. If adopted on a larger scale, the tagging system may help reduce access of illegally caught fish to commercial markets. “Another major motivation for the project was related to limiting the amount of black fish entering the supply chain,” said Tom, “because the tags each have a unique serial number, they can’t be forged, so when a buyer searches the serial number in the records they can see whether or not it’s genuine, commercially caught fish.”

The data gathered from the project was reported to the Welsh Government council in December 2016. With fishermen’s participation in the project, the findings will help to provide evidence on the bass stock and help shape future management of the species. “This project solves the information gap in a data-poor fishery,” said Tom. “Small-scale, artisanal fisheries

around the world are data-poor and the Welsh bass fishery is no exception. This project has allowed us to collect a large amount of data to report to industry and government, which will help aid management decisions in the future.”

The pilot phase of the project is now complete. The six volunteer fishermen helped to identify the best solutions that were appropriate and practical. Bass tagging in Wales is ongoing though, as Tom explained: “The project continues; the Welsh Fisherman’s Association (WFA-CPC) are managing the distribution of tags to Welsh

bass fishermen, and we [Succorfish] are managing and reporting the data. The project is very much driven by industry; and we hope that more fishermen will get involved.”

The Welsh bass tagging project is an excellent example of the industry working with scientists and the government to improve the local industry. The pilot phase has allowed fishermen to get involved from the beginning to choose the technology that’s most appropriate for them. Although the project is still in its early stages, the trial proved successful, and the project has been rolled out further this year.



Tagged bass ready for sale.

