

Protected food, drink or agricultural product name

Single document for 'Pembrokeshire Native Oysters'

GB number: F0108

A protected geographical indication (PGI)

1. Product name(s)

'Pembrokeshire Native Oysters'

2. Country

Great Britain

3. Description of the agricultural product or foodstuff

3.1. Type of product [as in Annex XI implementing regulation 668/2014]

1.7: Fresh fish, molluscs and crustaceans and products derived there from

3.2. Description of the product

"Pembrokeshire Native Oysters" *Ostrea edulis* are farmed oysters which are grown and harvested in the Daugleddau estuary in Pembrokeshire from seed and part grown oysters supplied by bio-secure commercial hatcheries and producers. The specific marine environment of the Daugleddau estuary has nutrient rich Atlantic waters mixing with freshwater flowing down from the Preseli Mountains through salt marshes and seagrass bed. This imparts a distinct set of organoleptic characteristics or "merroir" to the oysters.

'Pembrokeshire Native Oysters' are a slow growing native oyster which take up to 5 years to reach a minimum marketable size of 75g. Despite some variation in shell morphology, native oysters typically have a characteristic circular shape with a slightly domed cross section when grown on the seabed and develop a small extension to the left of the hinge. The clean shell is off-white but may take on pink pigments from its algal food and if grown on the seabed, the surrounding sediment.

Native Oysters are a meaty oyster characterised by a large abductor muscle and distinctly firm flesh with approximately a 1:1 shell length: width ratio.

<i>Flavour</i>	<i>Big ‘punchy’ ‘meaty’ ozone flavour, vibrantly fresh clean & sweet, with fresh cucumber and marine overtones to deliver a complex mineral quality on the palate. Unctuous brine taste with a complex umami punch</i>
<i>Aroma</i>	<i>Fresh sea aroma</i>
<i>Texture</i>	<i>Crisp bite and mouthfeel, crunchy texture and a distinctive silvery and umami finish</i>

‘Pembrokeshire Native Oysters’ are slower to mature, than more commercial species such as rock oysters. Taking nearly 5 years to reach market size they have more time to take on the subtle characteristics of the “merroir, and this allows the ‘complex umami punch’ characteristics to fully develop.

Native oysters have a strict season for harvesting between September – April, the traditional shellfish season months with an “R” in their name.

‘Pembrokeshire Native Oysters’ are a sought-after delicacy commanding a premium price on restaurant menus compared to mass produced volume oysters. ‘Pembrokeshire Native Oysters’ are a low volume /high value product, almost always eaten fresh and raw with a few drops of a condiment such as lemon juice, tabasco or mignonette dressing.

3.3 Feed (for products of animal origin only) and raw materials (for processed products only)

N/A

3.4. Specific steps in production that must take place in the identified geographical area

‘Pembrokeshire Native Oysters’ are grown and harvested in the Daugleddau estuary in Pembrokeshire.

If harvested in Class A waters – purification is optional

If harvested in Class B waters – purification is obligatory

The Purification process does not have to take place in the geographical area.

3.5. Specific rules concerning slicing, grating, packaging, etc. of the product the registered name refers to

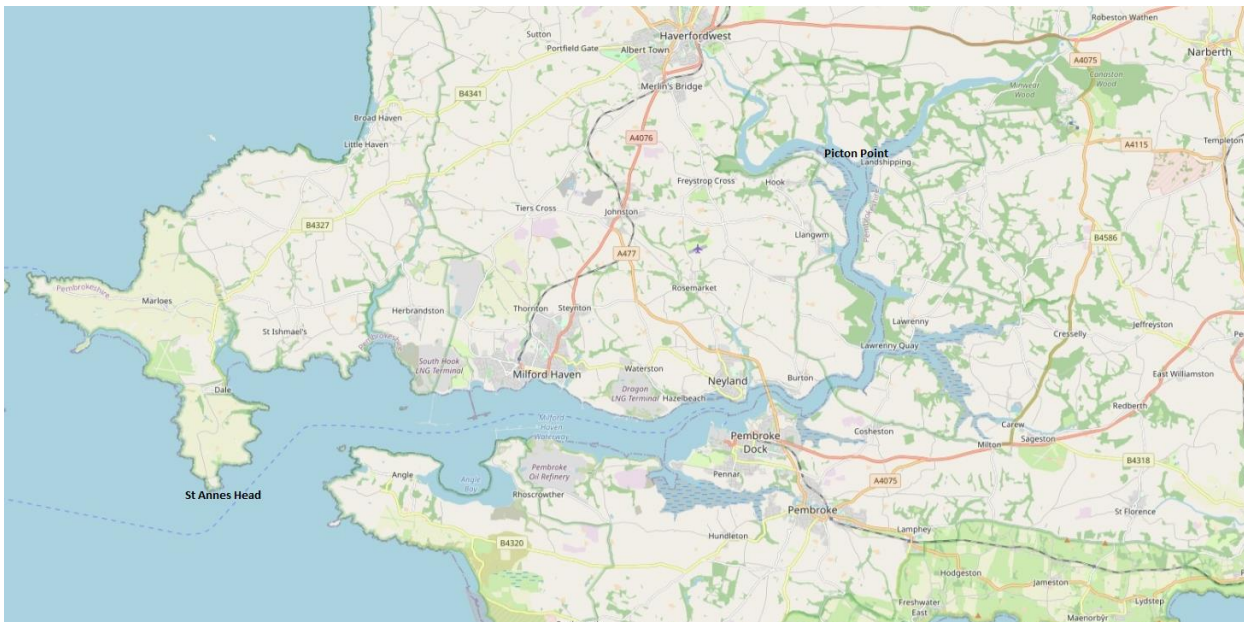
N/A

3.6. Specific rules concerning labelling of the product the registered name refers to

N/A

4. Concise definition of the geographical area

Pembrokeshire Native Oysters are farmed in the tidal waters of the Cleddau estuary between St Annes Head in the lower estuary and Picton Point in the upper estuary.



5. Link with the geographical area

Oysters are influenced by their environment and as a product express a lot of this “merroir” through their flavour.

‘Pembrokeshire Native Oysters’ can only be farmed in the tidal waters of the Daugleddau estuary between St Annes Head in the lower estuary and Picton Point in the upper estuary.

Geography

The provenance of 'Pembrokeshire Native Oysters' is the key factor in influencing their form and flavour profile. "Merroir" is a term used in the context of oysters that mirrors the concept of "terroir" in wine. It refers to the idea that the flavour of oysters is significantly influenced by the environment where they are grown. This includes the composition of the water, the types and quantities of algae and other foods available, the salinity and mineral content of the water, the water temperature, and other environmental factors. Just as terroir affects the taste and characteristics of wine, merroir affects the taste and texture of oysters

Daugleddau estuary and rivers of the Western and Eastern Cleddau make up a complex region of tidal river estuary, with numerous branched side channels containing mudflats and saltmarsh. Upper estuary waters cut through a complex ancient geology picking up mineral elements of Bluestone, Old Red Sandstone, Carboniferous Limestone and Millstone Grit. The surrounding rolling grassy hinterland is interspersed with stretches of steep rocky shore, with mixed and ancient woodland to the water's edge with numerous streams bringing elements of these habitats to the estuary. Downstream the waters pass through Grey and Red Sandstones and flow over sandy seabed towards the mouth of the estuary. The deep outer estuary west of Pembroke Dock is a large sheltered drowned ria (ancient river valley). The mouth of the estuary is exposed to the open sea with strong tides and currents. This contrasts with the sheltered bays at Dale, Angle Bay, and creeks such as Sandy Haven Pill. The surrounding low rocky seaweed covered shores give way to high cliffs at the seaward most extent. The complex mix of trace elements transported by the estuary waters are considered to contribute to the "merroir" of 'Pembrokeshire Native Oysters' described as having a 'complex umami punch' with a 'meaty ozone flavour'.

The 'Pembrokeshire Native Oyster' growing areas benefits from the turbulent mixing of clean and nutrient rich Atlantic seawater, brought twice daily by the large tides, with the sweet waters of the Daugleddau estuary. This circulation of water in the deep estuary produces an environment with a distinct mix of salty sea water and river water. It is in this area, where the salt water from the sea mixes with the fresh water from the East and West Daugleddau rivers, that form the main oyster production areas.

The marine environment of the Daugleddau estuary where nutrient rich Atlantic waters mix with freshwater flowing down from the Preseli Mountains through salt marshes and seagrass beds imparts a distinct set of characteristics or "merroir" to the oysters. Contributing to the oysters 'distinctive silvery and umami finish' with 'fresh cucumber and marine overtones'

Oysters are filter feeders and are wholly reliant on local sources of planktonic food. This food is predominately phytoplankton (marine single celled algae) and Particulate Organic Matter (POM) such as microscopic seagrass and seaweed fragments.

There are significant but predictable fluctuations in planktonic food availability. These are influenced by seasonal changes in temperature, sunlight hours and climatic conditions such as rainfall around Pembrokeshire. Typically, there is a spring bloom of phytoplankton which, with warming seawater temperature, triggers and supports growth in the oysters.

Phytoplankton production plateaus over the summer and is followed by a further autumn bloom in the later summer months. POM varies throughout the year but POM originating from the surrounding seagrass beds and intertidal seaweed is thought to be higher in the autumn and early winter as the deciduous seagrass shed their fronds and stormy weather breaks up the seaweed stands.

The local sources of planktonic food impart over the life of the oyster a complex variety of delicate flavours to the flesh and can even influence the colour of both flesh and shell.

The Daugleddau estuary forms part of the Pembrokeshire Marine Special Areas of Conservation (SAC) and a large part of the catchment forms the Cleddau Rivers SAC and as such are routinely monitored for quality by Natural Resource Wales. Seed and partly grown oysters are supplied from commercial hatcheries. Pembrokeshire Native Oysters are then grown wholly within a series of biodiverse and rich SAC and Special Site of Scientific Interests. (SSSI)

History

The strong link between the designated area and the product is evident from historical records. The native oyster fishery was until the early 2000s an important part of the shellfish industry in South Wales. Owen's 1603 "Description of Pembrokeshire" presents detailed accounts of extensive native oyster beds and associated fisheries occurring in the Milford Haven waterway.

In the late 19th century, the oyster fishery employed many hundreds of people, supported 200 vessels from small ports along the South Wales coast landing over 9 million oysters per annum, many of which were transported to the London markets and beyond to the continent.

In Pembrokeshire the Daugleddau Estuary was the centre of native oyster fishing employing boats from the fishing villages of Angle, Lawrenny, and Llangwm. Lewis (1833) described Lawrenny as having many inhabitants who dredged in winter for oysters which were found in great abundance and conveyed principally to London markets in boats from Chatham and Rochester.

Knowledge and Skill Base

Human Factors

Best practice in oyster growing has developed with changing attitudes to how farmers work with the natural world. Oyster farmers have developed novel approaches to growing 'Pembrokeshire Native Oysters' which means that their operations have the lightest of touches on the marine environment. These considerations mean that production is relatively small compared to other more industrialised production areas in Europe. Large volume farmers in Ireland and France benefit from economies of scale but require correspondingly large spatial footprint on the shore and high levels of mechanisation with the use of tractors and machinery on the shore. Farming oysters in sensitive sites in Pembrokeshire, where all areas of shore are highly protected, require a different business model based upon high-quality low volume production which enables the use of less

mechanisation and smaller low-impact vehicles and adopting a smaller spatial footprint which reduces potential impacts to shore habitats.

Growing oysters in the estuary requires a particular set of skills as the oyster farm staff need to understand the biology and ecology of their oysters, the natural cycles of both oyster and the wider environment, and then be able to apply that understanding to their stock husbandry and farm operations which themselves are dictated by tide, wind and weather.

Safe working in an estuary with one of the highest tidal ranges in the UK requires an intimate understanding and awareness of the sea and how the weather can influence its behaviour. This depth of understanding can only be learned on the job and through experience passed on to new entrants.

Sustainability

Oyster farming is considered to be the leading form of Restorative Aquaculture and provides a suite of ecosystem services to the environment leaving it in comparatively better condition. Oyster farming provides important ecosystem services, including water filtration, as oysters efficiently remove pollutants and excess nutrients, improving water clarity and quality. Additionally, oyster farms create habitats for a variety of marine species, enhancing biodiversity and supporting coastal ecosystems. The comprehensive licencing system requires that all oyster farming carried out in the estuary are subject to extensive Habitat Regulation Assessments. This ensures that farm management and operations address risk to sensitive habitats and species.

Reputation

The use of the name 'Pembrokeshire Native Oysters' as a quality product is well established and highly recognised by the food industry both regionally and nationally among fishmongers and restaurants. They are used by chefs who value their quality and specific merroir, and regularly appears as a named ingredient on their menus. Renowned restaurateurs and agri-food businesses have demonstrated their preference for these oysters.

There is high demand for 'Pembrokeshire Native Oysters' with chefs sourcing them for specialist restaurants around the UK.

Quotes:

'Pembrokeshire Native Oysters'

*"It's so special to have local native oysters in Pembrokeshire! They have a unique big 'punchy' **taste of the sea**, that fits so well with the natural surroundings of the county and a crunchy 'meaty' texture".*

Douglas Balish (Executive Chef, Grove Hotel Narbeth)

"Pembrokeshire Native Oysters' exude the essence of the Irish Sea & Atlantic. Big ozone flavour, vibrantly clean & sweet. However, what makes the oyster truly remarkable is it's

unctuous brine and it's satisfying crunchy texture. A joy to taste, a real treat from the coast.”

Simon Lamont (Rocks Oysters Ltd specialist oyster merchant, London)

ENDS

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