



# The French edible seaweed market

## An analysis of existing products

### IDEALG project

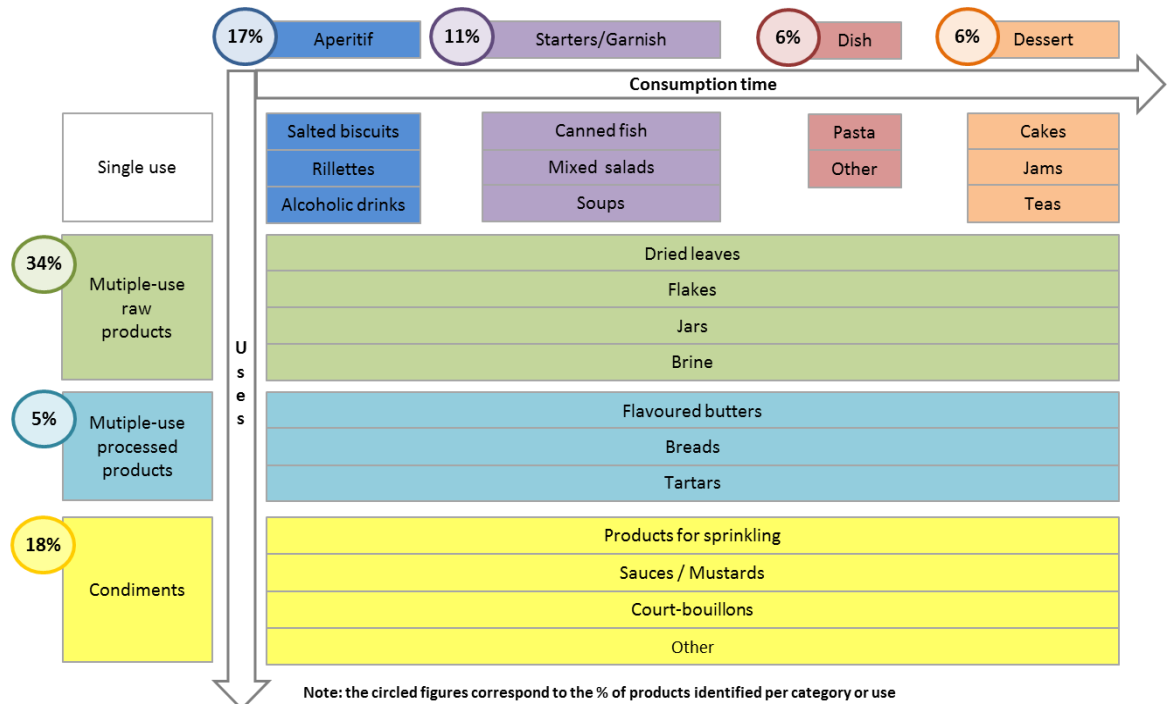
#### Context and method

A list of all seaweed products currently available in France has been compiled using two complementary sources of information: **websites of seaweed producers and processors** presenting their companies and products and a **shop survey**. Website data were collected during the first quarter of 2014. The shop survey was carried out in 2014 in 111 shops in 7 cities in France - Bordeaux, Lille, Lyon, Montpellier, Paris, Rennes and Strasbourg – to supplement the list of products identified on the Internet.

Note: This survey focuses on **French-style seaweed products** adapted to Western food habits. **Asian-style products** (sushi, miso soups and wakame salads), which are sold under many brand names in France and are widely available in shops, are therefore excluded.

#### Product categories

Many seaweed products have been identified. Given their diversity, and to help with the analysis of them, they have been put into categories **according to when they are consumed**. Some products, due to their composition, are consumed at any time and have been therefore classified according to their use(s).



Categories of currently available French-style seaweed products

## Seaweed products eaten as appetisers

The aperitif is a convivial consumption time for whetting the appetite before a meal. It may be more sophisticated, especially when served as a buffet. Three categories of seaweed products have been included in this consumption time: salted biscuits, rillettes and alcoholic drinks. They account for 17% of all French-style products identified.

Characteristics	Salted biscuits	Rillettes	Alcoholic drinks
Products	<ul style="list-style-type: none"> <li>Savoury biscuits</li> <li>CROUTONS</li> <li>Toasts</li> <li>Ready-mix for salted cakes</li> </ul>	<ul style="list-style-type: none"> <li>Fish, shellfish, crustacean and cephalopod rillettes</li> <li>Country-style pâtés</li> </ul>	<ul style="list-style-type: none"> <li>Pastis</li> <li>Liqueurs</li> <li>Beers</li> </ul>
Species of seaweed used	<ul style="list-style-type: none"> <li>Wakame</li> <li>Laver</li> <li>Mixture of seaweed</li> </ul>	<ul style="list-style-type: none"> <li>Sea lettuce</li> <li>Wakame</li> <li>Laver</li> <li>Dulse</li> </ul>	<ul style="list-style-type: none"> <li>Unidentified seaweed</li> </ul>
Average price (2014)	<ul style="list-style-type: none"> <li>€3.1/100g</li> </ul>	<ul style="list-style-type: none"> <li>€5.3/100g</li> </ul>	<ul style="list-style-type: none"> <li>€6 / 75cl of beer</li> <li>€35 / 75cl of spirits</li> </ul>
Positioning			
Uses	<ul style="list-style-type: none"> <li>Ready-to-eat</li> <li>To be used with spreadables</li> </ul>	<ul style="list-style-type: none"> <li>To be spread on toasts and sandwiches</li> </ul>	<ul style="list-style-type: none"> <li>Ready-to-eat</li> </ul>
Images	<ul style="list-style-type: none"> <li>Festive</li> <li>Original</li> <li>Subtle, new flavour</li> </ul>	<ul style="list-style-type: none"> <li>Festive</li> <li>High-end</li> </ul>	<ul style="list-style-type: none"> <li>Original</li> <li>Typically Breton</li> <li>High-end</li> </ul>
Distribution channels	<ul style="list-style-type: none"> <li>Internet</li> <li>Delicatessens</li> <li>Organic shops</li> </ul>	<ul style="list-style-type: none"> <li>Internet</li> <li>Delicatessens</li> <li>Organic shops</li> <li>Shops selling Breton products</li> </ul>	<ul style="list-style-type: none"> <li>Internet</li> <li>Liquor merchants</li> <li>Shops selling Breton products</li> </ul>

## Seaweed products eaten as starters

The first part of a traditional French meal is a starter, i.e. a small portion of food, either hot or cold. This consumption time include 4 categories of seaweed products: canned fish, ready-made mixed salads, dry mixes for salads and soups, and accounts for 11% of all identified products.

Characteristics	Canned fish	Salads	Soups
Products	<ul style="list-style-type: none"> <li>Canned fish and shellfish</li> </ul>	<ul style="list-style-type: none"> <li>Ready-made mixed salads (2<sup>nd</sup> range)</li> <li>Fresh salads (4<sup>th</sup> range)</li> <li>Dry mixes (6<sup>th</sup> range)</li> </ul>	<ul style="list-style-type: none"> <li>Preparations for soups</li> <li>Fish soups</li> </ul>
Species of seaweed used	<ul style="list-style-type: none"> <li>Wakame</li> <li>Kelp</li> <li>Sea spaghetti</li> <li>Mixture of seaweed</li> </ul>	<ul style="list-style-type: none"> <li>Sea spaghetti</li> <li>Wakame</li> <li>Mixture of seaweed (sea lettuce, dulse, laver, wakame)</li> </ul>	<ul style="list-style-type: none"> <li>Wakame</li> <li>Mixture of seaweed</li> </ul>
Average price (2014)	<ul style="list-style-type: none"> <li>€5.2/100g</li> </ul>	<ul style="list-style-type: none"> <li>€3/100g</li> </ul>	<ul style="list-style-type: none"> <li>€0.9/100g</li> </ul>
Positioning			
Uses	<ul style="list-style-type: none"> <li>Ready-to-eat</li> <li>To be cooked</li> </ul>	<ul style="list-style-type: none"> <li>Ready-to-eat</li> <li>Garnish</li> </ul>	<ul style="list-style-type: none"> <li>Ready-to-eat</li> <li>To be cooked</li> </ul>
Images	<ul style="list-style-type: none"> <li>Tradition</li> <li>Original</li> <li>High-end</li> </ul>	<ul style="list-style-type: none"> <li>Healthy product</li> <li>Convenient</li> </ul>	<ul style="list-style-type: none"> <li>Health food</li> <li>Tradition</li> </ul>
Distribution channels	<ul style="list-style-type: none"> <li>Internet</li> <li>Delicatessens, canned fish outlets</li> <li>Organic shops</li> <li>Shops selling Breton products</li> </ul>		

## Seaweed products eaten as main dishes

The main dish is the central part of the meal. It usually combines fish or meat with a portion of vegetables and/or starchy food also called garnish. Two categories of seaweed products are included in this consumption time: pasta and other trimmings. They account for 6% of the seaweed products identified.

Characteristics	Pasta	Other
Products	<ul style="list-style-type: none"> <li>Seaweed pasta</li> </ul>	<ul style="list-style-type: none"> <li>Rice, lentils, quinoa</li> <li>Ratatouille</li> <li>Preparation for hash browns</li> </ul>
Species of seaweed used	<ul style="list-style-type: none"> <li>Wakame</li> <li>Dulse</li> <li>Laver / Green laver</li> <li>Sea spaghetti</li> <li>Mixture of seaweed</li> </ul>	<ul style="list-style-type: none"> <li>Wakame</li> <li>Sea spaghetti</li> <li>Mixture of seaweed</li> </ul>
Average price (2014)	• €1.9/100g	• €2.3/100g
<b>Positioning</b>		
Uses	<ul style="list-style-type: none"> <li>To be cooked as main dish</li> <li>Garnish</li> </ul>	<ul style="list-style-type: none"> <li>To be cooked as main dish</li> <li>Garnish</li> </ul>
Images	<ul style="list-style-type: none"> <li>Original</li> <li>Subtle, new flavour</li> <li>Healthy product</li> </ul>	<ul style="list-style-type: none"> <li>Original</li> <li>Subtle, new flavour</li> <li>Healthy product</li> </ul>
Distribution channels	<ul style="list-style-type: none"> <li>Internet</li> <li>Delicatessens</li> <li>Organic shops</li> </ul>	<ul style="list-style-type: none"> <li>Internet</li> <li>Delicatessens</li> <li>Organic shops</li> </ul>

## Seaweed products eaten as desserts

The dessert is the last part of a traditional French meal. It is generally composed of a dairy product, a sweet product and/or a hot beverage. Four categories of seaweed products are included in this consumption time: sweet biscuits, sweet spreadables, cheeses and hot beverages. They account for 6% of the seaweed products identified.

Characteristics	Sweet biscuits	Sweet spreadables	Hot beverages
Products	<ul style="list-style-type: none"> <li>Shortbreads</li> <li>Breton-style biscuits</li> </ul>	<ul style="list-style-type: none"> <li>Jams, marmalades and jellies</li> <li>Caramel and lemon custard</li> </ul>	<ul style="list-style-type: none"> <li>Teas</li> <li>Herbal teas</li> </ul>
Species of seaweed used	<ul style="list-style-type: none"> <li>Wakame</li> <li>Sea spaghetti</li> <li>Mixture of seaweed</li> </ul>	<ul style="list-style-type: none"> <li>Wakame (mainly)</li> <li>Unidentified seaweed</li> </ul>	<ul style="list-style-type: none"> <li>Wakame</li> <li>Kelp</li> <li>Laver</li> <li>Sea lettuce</li> <li>Dulse</li> </ul>
Average price (2014)	• €2.7/100g	• €3.1/100g	• €7.3/100g
<b>Positioning</b>			
Uses	<ul style="list-style-type: none"> <li>Ready-to-eat</li> <li>To accompany gourmet coffee</li> </ul>	<ul style="list-style-type: none"> <li>To be spread</li> <li>To flavour yogurts or preparations</li> </ul>	<ul style="list-style-type: none"> <li>To be infused</li> <li>To flavour preparations</li> </ul>
Images	<ul style="list-style-type: none"> <li>Original</li> <li>High-end</li> </ul>	<ul style="list-style-type: none"> <li>Local product</li> <li>Tradition</li> <li>Original</li> </ul>	<ul style="list-style-type: none"> <li>Local product</li> <li>Original</li> <li>Healthy product</li> </ul>
Distribution channels	<ul style="list-style-type: none"> <li>Internet</li> <li>Producer stores</li> <li>Shop selling Breton products</li> </ul>	<ul style="list-style-type: none"> <li>Internet</li> <li>Shops selling Breton products</li> </ul>	<ul style="list-style-type: none"> <li>Internet</li> <li>Organic shops</li> <li>Delicatessens</li> <li>Shops selling Breton products</li> </ul>

Dairy products served as desserts are limited to cheese incorporating dulse, laver or sea lettuce. These local, original products are still marginal and are only sold at the farm or at street markets.

## Seaweed products with multiple uses and other products

These products account for more than **half of French-style seaweed products identified** (around 57%). They vary widely and range from raw products to processed food and condiments. They may be used at different consumption times.

- Raw products** Dried seaweed leaves, whole or in flakes, and wet seaweed in jars or in brine have undergone little processing and have a **long shelf-life**. They may be used in all types of recipes, with knowledge of how to cook and prepare them. The price of dried seaweed products is usually **two to three times** higher than that of wet seaweed products.
- Processed products** Seaweed butters and breads are convenient, artisanal products with a low seaweed content. Unlike **tartars, the flagship seaweed products on the French market**, their sales are limited.
- Condiments** Products for sprinkling (salts and seasoning), sauces (mustard, chutney) court-bouillons and other seaweed condiments (vinegar) are convenient products that can be stored for a long time and are fairly common on the French edible seaweed market. They **enhance the taste** of recipes whatever the consumption time.
- Other** Rice or grain cakes, oat biscuits and smoothies with seaweed are products that benefit from the **“health” image of seaweed** and have a high nutritional value. These ready-to-eat products are increasingly present on the French market.

## Current trends on the French seaweed market

**Two thirds of French-style products** offered by French producers and processors on the seaweed market are **raw products, spreadables and condiments**.



**Proportion of French-style seaweed products currently sold in France**

The current offer of French-style seaweed products, however, is extremely varied and includes raw and processed, sweet and salted products, health food, high-end products and traditional Breton products. Consumers have therefore plenty of choice to **incorporate seaweed into their diet whatever the consumption time**.

### For further information

LE BRAS Quentin, RITTER Léa, FASQUEL Dimitri, LESUEUR Marie, LUCAS Sterenn, GOUIN Stéphane. 2015. Etude du marché français des algues alimentaires. Catalogue et analyse des produits existants. Programme IDEALG Phase 2. Les publications du Pôle halieutique AGROCAMPUS OUEST n°37, 41 p.

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All the results are available on the Fisheries and Aquatic Sciences Centre website:

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