



## NATURALITY IN THE INGREDIENTS

Today, more than half of all companies say they are committed to sustainable development, but it is becoming increasingly clear that reconciling environmental and economic performance involves many difficult choices. Only **21% of companies have a clear roadmap for implementing their sustainability strategies**. At [AFYREN](#), we believe that sharing knowledge and experience can contribute to a more **sustainable future**. In our blog posts, we seek to share the expertise we have developed on our own journey toward a **sustainable, circular business model**.

In this overall objective, agriculture and the food industry have important roles, not only because they have to fulfill one of our basic needs, but also because their environmental footprints are meaningful. Globally, we use around **70% of freshwater withdrawal for agriculture** and **food is responsible for about 26% of greenhouse gas emissions**.

Now that we understand the impact on the planet, the objective is to maintain quantity, quality, and diversity while respecting the environment. This is the second article in a series that takes a deep dive into the complex problems we need to overcome in these sectors by humbly presenting what we are trying to achieve at AFYREN.

## How the food industry can adapt to consumer tastes, naturally

The popularity of apps like [Yuka](#), [Healthy Living](#), or [INCI Beauty](#), which provide healthiness scores and information on the ingredients in food and cosmetics, underscores how much **today's consumers are concerned about what's in their food**.

The food industry's reputation is constantly under fire, from safety concerns over additives and the presence of pesticide residue, to old-fashioned tainted meat scandals (see [horsegate](#)). It is no wonder that **consumers are skeptical about the quality of the products the food industry** has on offer.

Consumers are focusing both **on the quality of the food** and **the information provided on packaging**.

But it is not just about ingredients. People are demanding **increased transparency along the entire food production chain**. They want to know where the food comes from, how it was produced, what its nutritional value is, and even its environmental footprint.

In a [survey conducted by the International Food Information Council](#), **62% of respondents said they were paying more attention to ingredient lists now than they did five years ago**.



# Buzz words aside, consumers seek transparency

Now, with **information piling up** on food packaging and on digital outlets like Yuka, **it can sometimes be hard to separate the wheat from the chaff.**

[Behavioral economics](#) suggests that, in a context where consumers are overloaded with information and choice, they tend to rely on heuristics, or mental shortcuts, that give **high importance to less complex information**. This could explain the trend toward so-called “**clean**” **labels** – for food that does not contain artificial ingredients or additives, or simply has a short list of components. “**Natural**” **products** are also perceived as better or safer, closer to the raw material.

Standards for the use of ‘Natural’ on food labels require the **use of natural basic ingredients** and a **traditional production process**.

Buzz words aside, consumers are looking for information that could lead to a **better understanding of the food production process** and its impact on their health.

So **how can we help restore consumer trust in food products ?** The food industry is one of **AFYREN’s main markets**, and we are winning business on a simple promise: the molecules we sell into the food industry are created through **a natural fermentation process**, using **regional agricultural co-products** as feedstock instead of petroleum derivatives.

Our feedstock is traceable, transparently sourced, and near the factory to ensure the shortest supply chain possible.

## AFYREN technology is based on natural fermentation

Our technology is based on one of the most ancient food-preservation processes : [fermentation](#). By **mimicking metabolic chains** found in natural ecosystems, **AFYREN produces a set of molecules using raw substrates without pretreatments**, such as beet pulp. More precisely, **a mix of microorganisms** is used rather than a single type, to transform all the material available with a rich and varied natural enzymatic load.

**The microorganisms AFYREN uses are not genetically modified** as in many precision fermentation processes.

This innovation enables us to provide food companies with **high quality, biobased, organic acids** that come from a lean and natural process that meets food safety requirements such as those in the [FSSC 22000 Standard](#). This attention to consumer expectations has also led us to create ingredients that are suitable for products destined for **halal** and **kosher certifications** or for the **vegan market**.

For some ingredients, such as Acetic Acid, there are a few biobased options in an ocean of petro-based products, but **AFYREN** goes a step further with its **natural, GMO-free production process**, providing an opportunity to our customers to claim naturality.

Our other biobased, natural acids create brand new alternatives. For example, **Calcium Propionate (CalPro)**, widely used as a preservative in bakery products, had not been available in a biobased version before. A “clean label” option using fermented wheat flour was available, but it required six times the amount of product to reach the same level of food preservation as CalPro – and fermented wheat flour is much more expensive. Now, **AFYREN’s natural VITAFYREN™ Propionic acid** can be used to make Calcium Propionate and fill this gap in the market.

## Can tasty, healthy food – made naturally – restore trust?

**Plant-based diets, sustainable food practices and increasing demand for healthier food** are among the challenges the agri-food industry faces. Meanwhile, **flavor will always be a major factor**. Flavor houses will need to be creative to bring solutions that please the palate while meeting **a litany of consumer needs**: sustainable, local, clean labeled, natural, low salt/sugar/fat.

**AFYREN** helps address this challenge with **FLAVYREN™, a range of natural flavoring substances** produced in Europe through our innovative fermentation process. With it, flavor houses can develop an abundant selection of compositions to meet the demands of today's consumers for food that is **enjoyable** and has a **positive impact on our health and environment**.

As consumers become more discerning, the **food industry can innovate** by using more natural processes, such as **fermentation and the use of biobased raw materials**, while at the same time increasing **transparency**.

**We need to rebuild trust in the food system while preserving quality, reasonable prices and the environment.** The consumer, meanwhile, must be given the opportunity to gain a **better**

**understanding of industrial processes.**

For example, **even the savviest consumers may not be aware of the existence of biobased alternatives** to petro-sourced ingredients. And if they are aware, **they don't have the information** to choose products that use the biobased alternatives.

First-hand knowledge, through **more direct communication with food companies**, could help consumers rely less on third-party judgements of quality and **restore trust in the people** who make their food.

The desire for change in the food industry is global, and **AFYREN will continue to show its commitment to natural, biobased solutions and to enable food companies to be more transparent about their ingredients and processes**

