

Creation of Plant-based Protein Resources

 **Material Issue**
 **Creation of Sustainable Food Resources**

Management information

Relevance to our business

Since its early days, the Fuji Oil Group has been considering the future problem of food resources caused by the growing global population. We have explored the possibilities of soy protein and developed plant-based protein ingredients that can complement animal protein sources. We started our research on soybeans in 1957 and began selling textured soy protein in 1969. Through the years, we have developed over 70 kinds of soy meat ingredients and provided them to food manufacturers and other customers. With the world population expected to reach 9.7 billion by 2050, providing solutions to the problem of food scarcity by developing healthy plant-based protein ingredients with lower impact on the global environment has been our Group's mission since the company was founded. We also believe that providing wider choices of plant-based food products and creating a world where everyone can truly enjoy their meal is an important mission for the Group.

Basic approach

In recent years, there has been growing global interest in physical and mental health, global environmental problems, uneven distribution of food resources, and other social issues. Instead of merely replacing animal-based food with plant-based ones, our aim is to establish new markets for plant-based food products by creating delicious plant-based food ingredients that consider the health of people and the planet, thereby contributing to solving these social issues. We develop flavor technologies using only plant-based ingredients through a combination of fats, oils and proteins, with emulsified and fermented ingredients. We also create a wide range of textures and tastes through a combination of various isolated soy protein ingredients with fat and oil products. Our aim is to continue providing a variety of plant-based food ingredients in a way that supports diverse food cultures and people with special dietary needs.

Management system

The Chief Technology Officer (CTO) oversees initiatives in this area. The Sustainability Committee,^{*1} an advisory body to the Board of Directors, monitors the progress and results of initiatives as a material ESG issue.^{*2}

*1 https://www.fujioilholdings.com/en/sustainability/sustainability_management/

*2 <https://www.fujioilholdings.com/en/sustainability/materiality/>

Goals / Results

○ At least 90% complete △ At least 60% complete ✕ Less than 60% complete

FY2022 Goals	FY2022 Results	Self-assessment
Develop next-generation soy meat ingredients that provide new value	Marketed two soy meat ingredients developed to provide flavor, meat-like fibrous texture and mouthfeel	○
Develop plant-based processed foods (for side dishes, etc.)	Marketed ten processed food products (side dishes, noodle soup, confectionery, etc.) replacing meat, milk, and eggs with plant-based ingredients	○

Analysis

With the expanding market for alternatives to animal-based products, the Fuji Oil Group has leveraged the technologies for combining flavors and textures that we have developed over many years to develop new products such as meat alternatives with better quality than ever before. These have been well received and used by our customers in various products.

Next step

It is important to create an enjoyable experience with food and to help keep the planet and people healthy, rather than simply offering plant-based protein as a meat alternative. To address this issue, we set the following goals for FY2023.

- Develop next-generation soy meat ingredients that provide new value
- Develop plant-based processed foods to help our customers and address social issues, and expand the market for such foods

Specific initiatives

GOODNOON: A flagship initiative towards the vision stated in Fuji Oil Group Management Philosophy

We launched our flagship GOODNOON*¹ initiative in July 2022 to fulfil the vision*² stated in our Fuji Oil Group Management Philosophy, and started to work on expanding the market for Plant-Based Foods (PBF). Combining our Group's unique ingredients and technologies, we will make it possible to create "surprisingly delicious foods" more quickly and in more creative ways, helping to address social issues.



*1 <https://www.goodnoon.jp/> (in Japanese)

*2 Revised in April 2023 to: "Together with our stakeholders, we will co-create a sustainable future for food, based on plant-based ingredients that are both delicious and healthy."

R&D for the next-generation of plant-based protein ingredients

The Fuji Oil Group strives to develop products that bring out the flavor of plant-based food ingredients to help solve food insecurity and global environmental challenges. These products harness the development technologies of oils and fats and soy protein ingredients we have cultivated over many years.

Soy meat is gaining recognition as an alternative to real livestock meat. In FY2022, we developed two types of Prime Soy Meat Blocks, a product line pursuing a superior, delicious taste to dispel preconceptions about soy meat. By applying oil & fat and protein processing technologies, we have reduced the bean-like flavor and achieved both a meat-like moderately fibrous texture and mouthfeel that developers had previously found difficult to achieve.



Prime Soy Meat Block DN1



Example of use: Fried chicken-style soy meat



Prime Soy Meat Block WB1



Example of use: Soy meat cutlet

There is a growing social need for alternatives to animal-based foods in response to environmental issues and diversifying values, and the market for products like dairy-free chocolate is predicted to grow. By bringing together our Group's unique ingredients and technologies, we have developed chocolate with no animal-based ingredients which tastes just as good as milk chocolate and white chocolate. This dairy-free chocolate is highly regarded for its quality and is now used by café chains and chocolatiers.



White chocolate with no animal-based ingredients



Example of use: chocolate truffles

Proposing new value to consumers

Fuji Oil Holdings Inc. and Fuji Oil Co., Ltd. will leverage our expertise to provide “surprisingly delicious foods,” giving consumers more choice by making PBF an everyday food option. Aiming to expand the market for PBF, we are working with our customers to create new products, starting from the PBF strategy presentation in July 2022, when we announced the scheme of the flagship GOODNOON initiative.

Delicious PBF available to everyone

New Otani Co., Ltd.

The Hotel New Otani, operated by New Otani Co., Ltd., offers several dishes on its restaurant menu using soy protein products and soy milk-related products made by the Fuji Oil Group.



PBF dishes available at the hotel restaurant: Soy Meat and Tomato Stew, Healthy Soy Milk Pudding, Soy Milk Basque Burnt Cheesecake, from left to right (images from Hotel New Otani's website)

cotta Inc.

Since May 2022, we have entered into a capital and business alliance with cotta Inc. which operates one of the largest websites for confectionery and baking ingredients in Japan.

In a survey of around 10,000 people aged 15 to 69 in Japan, 25.2% said “there are not many places selling PBF.” This is why we jointly launched the cotta tomorrow* website in May 2023, to make PBF and other healthy ingredients available to more people. This provides an easy way for consumers to buy our Group's PBF products such as soy protein products. It is also a point of contact with consumers where we can communicate our Group's value. We are expanding the range of products available to buy through this website.

* <https://www.cotta.jp/tomorrow/index.php> (in Japanese) 



cotta tomorrow website (2D code)



From left: Akiko Kurosu, President of cotta Inc.; Kiyohito Suzuki, Executive Officer of Fuji Oil Holdings Inc.; Koichi Izumi, Chef-owner of restaurant ASTERISQUE

FamilyMart Co., Ltd.

In January 2023 the FamilyMart chain of convenience stores launched a range of “regional exclusive *karaage don*” dishes using “NAZOKARA®,” which is made with soy meat and MIRACORE® plant-based chicken-style *dashi* broth, in eight regions around Japan. As part of its efforts towards a sustainable food supply, FamilyMart is proactively using “NAZOKARA®,” a meat alternative, in anticipation of food shortages.



Regional exclusive *karaage don* using “NAZOKARA®” (image from FamilyMart's website)

Chikaranomoto Holdings Co., Ltd. (Ippudo)

Since July 2022, the ramen restaurant brand Ippudo, operated by Chikaranomoto Holdings Co., Ltd., has been offering plant-based ramen dishes including “Plant-based Akamaru,” made with a soup base using our MIRACORE® technology, on the regular menu at its Lumine Est Shinjuku branch.



Ippudo's Plant-based Akamaru ramen (Image: Chikaranomoto Holdings Co., Ltd.)

MIRACORE®: the core technology behind the delicious taste

MIRACORE® is a Fuji Oil Group technology brand that leverages the potential of plants to recreate the delicious taste that is typical of animal-based foods.

We are currently developing products focusing on the function of *dashi* broth or stock, an essential ingredient in dishes from around the world. In FY2022 we released two plant-based *dashi* products: a plant-based chicken-style *dashi* and a plant-based beef-style *dashi*. We are continuing with research and development with the aim of providing a satisfying taste for all kinds of dishes using MIRACORE® plant-based *dashi*.

We are also working together with professionals in various fields to create delicious plant-based solutions for the future, including speaking at the Zennippon Syoku Summit* in March 2023.

In FY2023, we will work to develop new business with products using MIRACORE®.

* https://www.fujioil.co.jp/news/2023/_icsFiles/afieldfile/2023/03/22/230323_Release_Miracore_clean.pdf (in Japanese) 



At the Zennippon Syoku Summit

Investing in a major Dutch fund dedicated to food technologies

In FY2021, Fuji Oil Holdings Inc. invested in Unovis NCAP Fund II through its subsidiary. This is a major fund dedicated to food technologies based in the Netherlands. Unovis Asset Management B.V., which manages the fund, is a pioneer in this field, particularly in the alternative protein sector, finding food tech businesses seeking to build new food systems at an early stage and helping them grow. The company also has specialists with extensive experience in the field of ESG who constantly monitor their portfolio companies from an ESG perspective.

Aiming to create a sustainable world through plant-based ingredients, the Fuji Oil Group positioned this investment as an initiative linking the Group's wide range of unique technologies with solutions to the world's food issues. Through ongoing communication with the fund management company and the food tech portfolio companies around the world, we will move forward to enter a wider range of alternative protein business sectors and build our business based on consumer needs, using the market-in approach.

Partnering with other companies on sustainable food

As a founding member of the Plant Based Lifestyle Lab (P-LAB)*, we are working to raise awareness of and promote PBF in collaboration with companies from a range of business domains.

Face-to-face events were held in FY2022 as COVID-19 restrictions were eased. At the P-LAB general meetings in April 2022 and March 2023, member companies shared examples of PBF development projects and products, and exchanged ideas through panel discussions with young managers of start-up companies. P-LAB was a special sponsor of the World King of Chefs Summit 2022, held in Awaji Island in November, where visitors showed great interest in the PBF menus offered in collaboration with member companies. During this event, Kiyohito Suzuki, Executive Officer, Division Head of PBF Division of Fuji Oil Holdings Inc., spoke at the World Food Education Forum in his capacity as a director of P-LAB, and talked about Fuji Oil's promotion of PBF as a step towards a sustainable future.

We at P-LAB also conducted a survey to investigate awareness of PBF. Going forward, as well as stepping up activities to serve as a communication hub of PBF information, we will continue to promote value creation by collaborating with member companies to develop new PBF products and dishes.

* Founded in March 2021 with 15 member companies and became a general incorporated association in October 2021. Currently has 48 member companies (as of July 2023)

<https://pbl-lab.net/> (in Japanese) 



Speech at the World Food Education Forum



P-LAB display at the World King of Chefs Summit

Developing a soy business to improve nutrition and increase female farmers' income in Burkina Faso

Fuji Oil Ghana Ltd. imports most of the shea kernels it uses from the neighboring Burkina Faso. Many of the women who harvest shea kernels in the region are also engaged in soybean cultivation.

Since 2019, the Fuji Oil Group has been conducting a business feasibility study on the procurement of soybeans and the development, manufacture and sale of soy meat in Burkina Faso. The aim is to improve the nutrition of local consumers and increase local farmers' income. This study was selected as a 2018 Survey on Businesses to Address Developing Country Issues (SDG Business)* by the Japan International Cooperation Agency (JICA). Within the JICA framework, the contribution of this project to achieving specific SDG targets was also examined.

Most consumers in Burkina Faso are not familiar with soy meat. In FY2022, we conducted a survey to investigate whether consumers would accept soy meat when prepared to suit local dishes, and designed a survey to investigate acceptable prices.

Going forward, we want to deepen our understanding of local social issues and markets so that we can leverage our Group's strengths to contribute to medium- and long-term solutions.

* JICA provides financial assistance of up to 50 million yen per proposal for a maximum of three years for Japanese companies planning to start a business that will contribute to the attainment of the SDGs in developing countries.