Business Strategy

Oil and Fat

- Oil and Meal
- Processed Oil and Fat

Continue to increase the value of oils and fats, serving as the propulsion engine behind the Group

Business characteristics

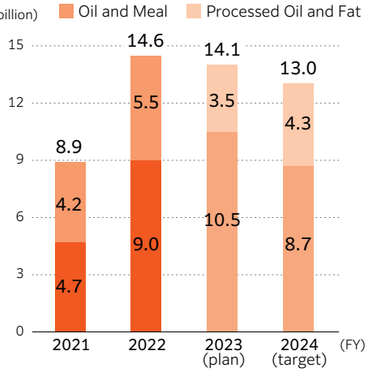
Oil and Meal

- The business will be primarily based in Japan on diverse plant resources, such as soybeans, olive, sesame, and flaxseed
- In the areas of household-use, commercial use, and food processing, the Company holds the top share (sales volume) of the domestic cooking oil market (approx. 35%)

Processed Oil and Fat

- Expansion of businesses with palm oil as the primary raw material, both domestically and globally
- Overseas sales account for the majority of our processed oil and fat sales thanks to the trust we have earned from global manufacturers of processed foods
- The global share of oils and fats for chocolate, which is a strategic product for us, is approximately 9% (by sales volume)

Operating profit



Key products

Oil and Meal

Household-use | Commercial-use | Food processing | Meal

Processed Oil and Fat

Margarine | Oils and fats for chocolate

Opportunities and Risks

Opportunities

- Increasing number of people actively consuming oils and fats for health purposes
- Expanding market for ready-to-eat foods due to diversification of eating styles
- Increasing need for labor savings in the food industry against the backdrop of labor shortages
- Expanding market for luxury goods due to the development of emerging countries

Risks

- Intensifying competition in the health-targeted market
- The shift away from cooking oils in households due to reduced cooking opportunities
- Risks of unstable procurement of raw materials and rising costs and geopolitical risks due to drastic climate change and increasing global demand for oils and fats
- Slowdown in market growth due to prolonged geopolitical risks

Business strategy

Oil and Meal

- To continue selling edible oils at an appropriate price based on the idea of improving its value and to promote the formation of new markets based on the concept of good value
- To improve the value of edible oils for household-use and to continue to expand the market through "structural reform for cooking oil" and "evolution of 'pour-and-enjoy' fresh edible oil"
- To formulate a new price equilibrium by increasing the composition ratio of "customer-solution-type" frying oils and value-added products with additional functions, and to promote the capturing of apparent demand through the solution of issues
- To promote a deeper understanding of commercial-use products users and foundation-building initiatives geared toward reform of our sales style

Processed Oil and Fat

- To promote the differentiation of the Group's products by combining ISF's (Malaysia) strengths, which is to say control over physical properties and quality, food safety, and raw material sustainability
- To promote the introduction of equipment for optimizing processes for increasing production capabilities in view of expanding sales for oils and fats for chocolate
- To establish production systems using new manufacturing methods for improving quality control operations
- To develop new business by improving intra-Group collaboration, including with ISF Italy, ISF Shanghai, and IADC (Indonesia) in particular
- To consider strengthening bases and formulating business strategies with an eye toward expanding target markets (Europe, North America, Southeast Asia)

TOPICS Establishment of an oilseed processing joint venture in the western Japan area

The Company will establish an oilseed processing joint venture company in the western Japan area with J-Oil Mills, Inc. on October 2, 2023 based on a shared understanding of the long-term issues facing the oil refining industry in Japan. The name of this new company shall be "Oilseed Processing Partners Japan, Ltd." The aim of both companies is to work together as partners to build a joint-management type operation that will ensure the international competitiveness of Japan's oil processing industry and a stable supply of oil over the long term. With this initiative, we are aiming to construct a next-generation mill that will enable us to better address issues facing the environment and society, including efforts to build smart factories and to decarbonize society.

製油パートナーズジャパン
Oilseed Processing Partners Japan

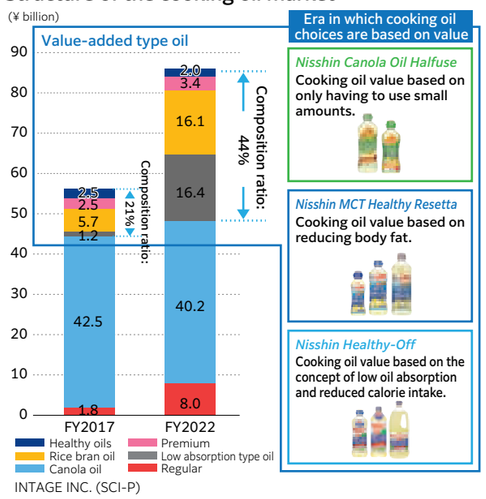
TOPICS Continuing to offer value to consumers and reforming the market structure for cooking oils

Ever since the launch in 1924 of *Nisshin Salad Oil*, the Company has continued to offer society new forms of value through provision of edible oils. In more recent years, we have begun offering a variety of value-added cooking oil products, including those for reducing calorie intake from fried foods and reducing body fat.

Following the rocketing of raw materials prices in the period from fiscal 2021 to fiscal 2022, we have been revising our prices based on detailed discussions with our customers with regard to the cost environment. And it is precisely because of these rising prices that consumers have become more keen on the value of edible oils and the products they select. Back in 2017, the composition ratio of value-added type oils in the cooking oil category was around 21%; however, in fiscal 2022, this figure increased to 44%.

Moving forward, we hope to help increase the vitality of the market by proposing products that meet the diverse demands of consumers.

Structure of the cooking oil market



INTAGE INC. (SCI-P)

Processed Food and Materials

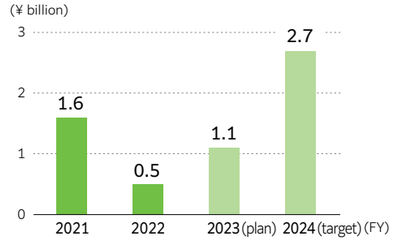
- Chocolate
- Seasoning
- Functional Materials and Foods
- Soybean Materials and Foods

Creating a virtuous cycle that continues to enhance the value of oils and fats as part of the value chain

Business characteristics

- Chocolate and seasonings are businesses that use oils and fats as base ingredients. We continue to refine application technologies in this sector as part of the oils and fats value chain, through which we aim to improve the value of oils and fats
- In recent years we have accelerated the global spread of our chocolate business
- The market size of MCTs, a strategic product for functional materials and foods, is on an expansion trend

Operating profit



Key products

Chocolate

Seasoning

Functional Materials and Foods

Soybean Materials and Foods

Opportunities and Risks

Opportunities

- Increasing need to prevent frailty and pre-frailty due to aging society
- Expanding market for luxury goods due to the development of emerging countries
- Diversifying factors required for good taste and functions required of food materials
- Increasing demand for plant-based foods

Risks

- Intensifying competition in markets targeting the elderly and preventive medical treatment
- Reputational risk from handling unsustainable raw materials
- Risk of unstable procurement of raw materials and rising costs due to drastic climate change and geopolitical risks

Business strategy

- To look to further develop our chocolate business in the Asian market by leveraging the synergistic effects of oils and fats for chocolate
- To increase the number of products that use MCT in the functional materials and foods business by continuing to approach manufacturers of processed foods as well as efforts to commercialize products and to follow up with distributors

TOPICS Global praise for the consistent taste of our chocolate

Daito Cacao is a specialized manufacturer of chocolate that delivers commercial-use products of consistent quality by employing a production system that processes carefully-selected cacao beans based on integrated production methods. The distinctively crafted flavor of the chocolate is recognized around the world and has won awards for two consecutive years at an international chocolate competition.

Fine Chemical

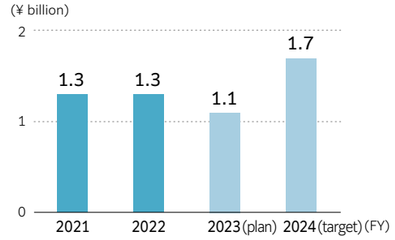
- Fine Chemical Products
- Environment and Hygiene-Related Products

Leveraging the superiority of our ester synthesis technologies to become a leading company of cosmetic oils

Business characteristics

- Fine chemicals use ester synthesis technology as its core technology through which a high level of quality stability has been achieved
- We have earned the trust of both domestic and global manufacturers of cosmetics and have a global share in cosmetics oils of approximately 9% (by monetary value)
- We are developing our business free from borders; the overseas sales ratio of cosmetic raw materials is approximately 40%

Operating profit



Key products

Fine Chemical Products

Environment and Hygiene-Related Products

Business strategy

- To strengthen technological proposals for increasing sales in Asia, Europe and North America and to expand sales by steadily capturing demand in the domestic market, which is undergoing a recovery
- To discover the potential functions of specialty cosmetic oils by leveraging our technical support functions and to develop a global solutions business in collaboration with our overseas bases

Opportunities and Risks

Opportunities

- Increasing domestic demand on the back of a recovery in the inbound market
- Increasing international demand for the safe use of chemicals
- Growing demand for plant-derived materials in cosmetics
- Expanding cosmetics market due to development of emerging countries
- Growing recognition of environmentally friendly businesses

Risks

- Decline in competitiveness due to handling of unsustainable raw materials and lack of certification
- Risk of unstable procurement of raw materials and rising costs due to drastic climate change and geopolitical risks
- Slowdown in market growth due to prolonged geopolitical risks
- Intensifying competition among environmentally friendly businesses

TOPICS Announcement of new products with enhanced “naturality”

Amid growing global interest in cosmetics developed around the concepts of natural and organic materials, we developed new products with enhanced “naturality” (plant-based preference and attention to environment) in terms of the raw materials used in their production. There are, however, limitations of functionality and quality in cosmetics made from naturally-derived ingredients, but we are focusing our research and development efforts on finding ways to overcome issues as we search the balance between “naturality” and functionality. We announced two new products at an exhibition held in May 2023, which attracted interest of many visiting customers from both Japan and overseas. Moving forward, we will continue to develop natural and original products while keeping a close eye on changes and trends in the laws and regulations in different countries.

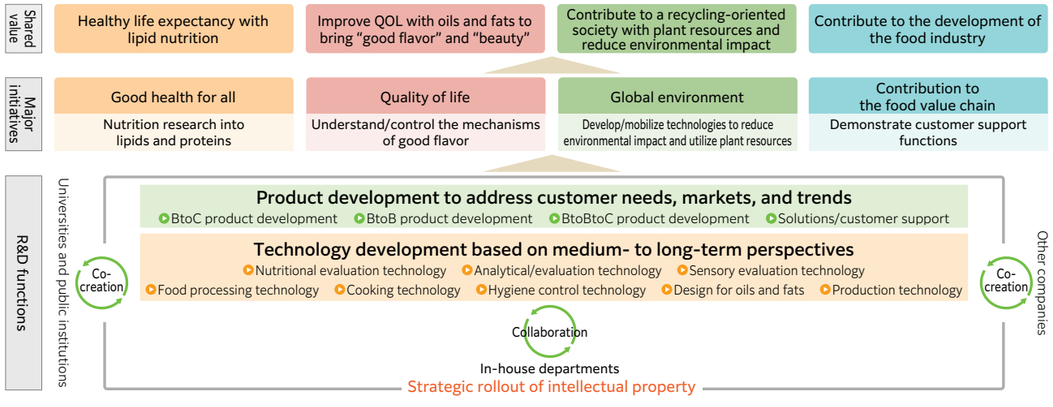
Fundamental Strategy

Research & Development

Intellectual capital

The Group responds to the diverse needs of its customers and to the issues facing society, including in terms of health, good taste, convenience, and reduced environmental impact, by leveraging its capabilities in technology and development based on its know-how accumulated over many years through its research into vegetable oils and fats. Based on our strength in technology with regard to evaluating the good flavor of oils and fats, evaluating nutrition, and the manufacturing and processing of oils and fats, we will increase collaboration and co-creation efforts both within and outside the Group as part of efforts to engage in research and development geared toward creating shared value under each of the priorities set out in Vision 2030.

So that the Company may become a global top provider of oils and fats solutions, it is vital that we master our core competencies and develop advanced original technological capacities. It is also necessary, then, to have the ability to offer such capacities to our customers to avail of these in a timely and sustainable manner. It is for this reason that we are focusing our efforts on laying the foundations for strengthening our strategic intellectual property-related activities and organizational capabilities through proactive investments in intellectual capital and human capital.



Our intellectual capital

R&D expenses

¥3,128 million

(FY2022; consolidated)

Number of patents held

Approx. 640

(FY2022; consolidated)

Number of Research Division personnel

146

(as of March 31, 2023; non-consolidated)

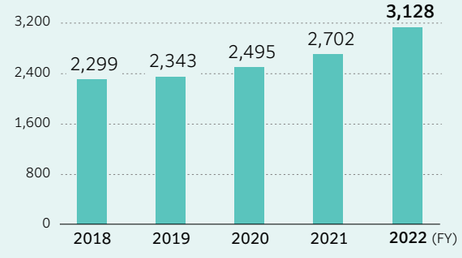
Number of joint research projects

36

(FY2022; consolidated)

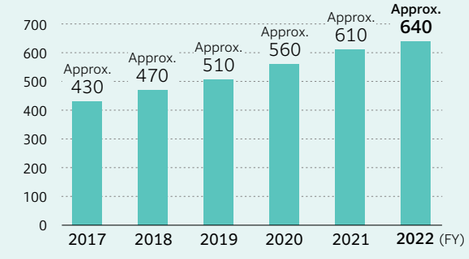
R&D expenses

(¥ million)



Number of patents held

(patents)



Intellectual property strategy

– Strategic intellectual property activities for encouraging the creation of shared value through MCT –

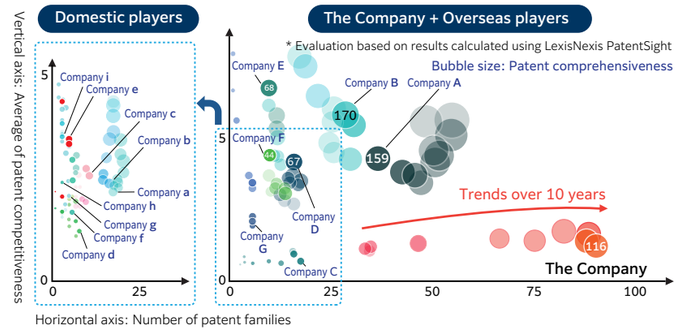
The Group's intellectual property strategy is focused on promoting the creation of shared value, ensuring our superiority in business operations and freedom in research and development. For example, MCT, for which we have been engaged in research and development for many years, can give the body energy more readily than regular oil, and so is used in a wide variety of scenarios, including improvement of undernutrition in the elderly, nutritional supplementation for sports, and also preventing lifestyle-related diseases. Extending healthy life expectancy and preventing lifestyle-related diseases are social issues that are not limited to Japan. Therefore, we are promoting the creation of shared value through MCT based on strategic intellectual property activities with the aim of these activities being applied on a global scale.

The Company possesses a great many patent rights (approx. 110 in Japan and approx. 120 overseas) delivered through knowledge on MCT cultivated over the years. We have an overwhelming competitive edge domestically in the food sector in particular, where we are on an equal footing to top global companies (see graph). Through our patenting of foods made using MCT, we have been able to prevent certain foods from being monopolized by competitors and therefore ensure an environment in which customers, who are users of these products, may compete freely with each other. In addition to promoting functionality by registering key messages relating to MCT as trademarks, we also developed a proprietary MCT logo which we is a logo not just for use by the Company but also to indicate that a processed food product was jointly developed using the Company's MCT.

As we proceed, we will continue with initiatives to add further value to, and to increase profitability of, MCT. For example, we have applied for a patent for a container with improved cleaning performance by reducing the MCT's adhesion and a product for helping prevent the aging of cooked rice so as to help prevent food loss. Furthermore, with an eye to future co-creation initiatives with external parties and global expansion, we are working to ascertain the relative levels of superiority with regard to the Company versus other players so as to help avoid the risk of infringements. In addition, as well as promoting the functions of MCT, we are striving to create new value by creating and implementing intellectual property strategies based on information aggregation, analysis, etc.

MCT logo

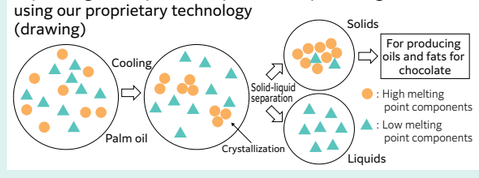
Changes in the scale of patented assets* related to MCT food applications



Improving palm oil processing technology to better meet the needs of the global market

Through efforts to increase sales of oils and fats for chocolate and other specialty fats, the Group is aiming to become one of the world's leading companies by fiscal 2024. We are working to realize an increase in sales of high value-added products and to expand sales volumes. In order to achieve this goal, it is indispensable that we develop technologies for the processing of palm oil, which is one of the main raw ingredients used in the production of oils and fats for chocolate. Palm oil is comprised of multiple oil and fat components with different melting points. Therefore, in order to extract oil and fat components suitable for chocolate applications, advanced technology is required to control oil and fat crystals. In a collaboration between ISF and NGRC (both in Malaysia) along with the Group's Technical Division, we have improved our oil and fat processing technology and established technology for extracting high-quality palm oil components that produce a clean and melt-in-the-mouth texture achieved through controlling the creation of crystal polymorphs. ISF is leveraging this technology to introduce equipment for increasing the production of oils and fats for chocolate. We are working together as a Group to strengthen our capacity for producing innovation and to allow us to better address social issues facing the world today, such as efforts to reduce our environmental impact, and to better respond to customer demands, such as ensuring both good flavor and "naturality."* We are also looking to improve the speed of our product development so as to ensure that we can continue to provide new oil and fat solutions.

Separating the required components for producing chocolate using our proprietary technology (drawing)



* Plant-based preferences and attention to environment

Transforming Our Production System

Manufacturing capital

Production is an important foundation for us to strengthen the competitiveness of our core competence: oils and fats. It is therefore essential that we are able to respond nimbly to changes in the environment surrounding the manufacturing sector. A key objective of Vision 2030 is to create our various shared values through sustainable supply systems. To this end, we are transforming our production system into a next-generation structure that highlights the strengths of each production base and enhances our comprehensive capabilities through integrated management.

In order to ensure momentum in realizing this transformation by 2030, we are strengthening these comprehensive capabilities by having ISF (Malaysia) and our other production bases refine their respective strengths and by ensuring that their knowledge base and success stories are shared horizontally with other bases and across the Group as a whole.

Efforts to transform the Nagoya Plant into a smart factory and the Sakai Plant into a sustainability center are underway at the respective work sites. Upon examining the results of these transformations and any issues that may present themselves, we will make this information openly available for use by the entire Group.

Key points

Achieving sustainable supply systems that create diverse shared value
1. Thorough strengthening of our competitiveness in the oil and fat business
2. Establishing supply systems for a broad range of products
3. Addressing environmental issues

Transformations of key production bases

Each production site refines its relative strengths

Yokohama Isogo Plant	Nagoya Plant	Sakai Plant	Mizushima Plant	ISF
The mother factory, serving as the driving force behind our technological development	Smart factory that utilizes ICT technology	Sustainability center that utilizes 100% renewable energy	Core operational base for oils and fats/oil and meal	Sustainable palm oil sourcing base

Roll out to entire Group

Transforming our production system into a next-generation structure by 2030

- Customer-driven value creation
- Realization of sustainable procurement
- Making further improvements to productivity
- Implementation of environment-related technologies
- Leading the way in international competitiveness in the oil extraction industry
- Realizing workplaces that are rewarding to work in

Manufacturing capital characteristics

Number of production bases:

12 sites across 8 companies in 6 countries (FY2022)

(1) Japan: The Company (4 sites), Settsu (Sakai), Daito Cacao (Nakai)
(2) Malaysia: ISF (Port Klang, Dengkil)
(3) Spain: IQL
(4) Singapore: T&C
(5) Indonesia: IADC
(6) Italy: ISF Italy

Scale of production:

Approx. 2.8 million t (FY2022)

* Total for the Company, Settsu, Daito Cacao, ISF, and IQL

Nagoya Plant: Value-added labor productivity

6.8%

[Time spent on generation: approx. 14,000 hours/year equivalent]

(as of August 31, 2023)

* Index representing the added value generated by each employee Calculating the time created by transforming the Nagoya Plant into a smart factory as added value

Sakai Plant: Ratio of non-fossil fuel energies

Ratio of electrical energy from non-fossil sources: 5.9%

Ratio of thermal energy from non-fossil sources: 9.2% (FY2022)

* Ratio of energy used at Sakai Plant from non-fossilized sources when both electrical and thermal energy are set to 100

Nagoya Plant: Transformation into a smart factory through radical reform of operations and leveraging of ICT DX

We are proceeding with efforts to transform the Nagoya Plant into a smart factory by undergoing radical reform of existing operations and the introduction of the latest ICT, allowing us to deliver productivity improvements, workstyle reforms, and to acquire and pass-on our technological capabilities. In the future, with an eye toward collaboration with other worksites, our aim is for the plant to be a place for sustainable and constructive production.

Specifically, upon reviewing the necessity for certain operations, we introduced ICT tools (cameras, sensors, etc.) and AI to the worksite, allowing us to monitor all camera images and data from digital instruments from the mechanical equipment operations room. By minimizing the work that has to be done on-site by employees, we are hoping to free up time and reduce employee workloads.

Furthermore, so that we can build a shipping process that is not reliant on human input, we are making reforms to shipping operations for lorries used for processed foods, etc. We are also making progress on digitalization, including the introduction of a shipping management system, covering a range of operations; from the receiving of lorries through to product loading, weighing, quality checks, and other shipping-related operations. We expect that this will result in positive workstyle reforms for employees engaged in shipping operations and reduced waiting time for drivers.

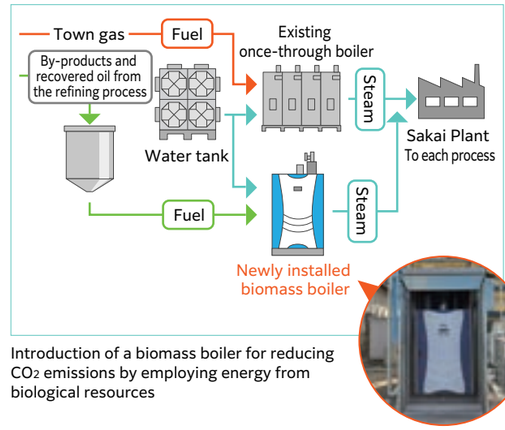
Reception of lorries using reception terminals and automatic issuance of tickets/slips

Sakai Plant: Sustainability Center Concept to support the realization of "Environmental Targets for 2030"

We are working to convert the Sakai Plant into a Sustainability Center based on the two axes of "Implementation of environment-related technologies" and "Palm oil sustainability" as we look to realize our goals of "Prevention of global warming" and "Conservation of plant resources/nature" as set out in "Environmental Targets for 2030."

With regard to the "Implementation of environment-related technologies," we have introduced solar power generation equipment using the PPA model at the Yokohama Isogo Plant, Nagoya Plant, and Sakai Plant. The equipment is being phased in stages starting from December 2022, with the equipment at the Sakai Plant entering full-scale operations in February 2023. Furthermore, a biomass boiler was installed at the Sakai Plant in December 2022, with trial operations underway as of February 2023. We are moving away from fossil fuel type energy sources by using biological (biomass) type energy sources such as from by-products and recovered oil generated during the refining process.

With regard to "Palm oil sustainability," we have introduced equipment to produce certain products as SG*2 products, which is one of the RSPO*1 certified oil management methods.



Introduction of a biomass boiler for reducing CO_2 emissions by employing energy from biological resources

*1 Roundtable on Sustainable Palm Oil
*2 Segregated (one of RSPO's authentication methods)

Building the digital infrastructure for reform of supply chain management (SCM) DX

Building an efficient supply chain is important if we are to realize a sustainable supply system. As part of this, we are working to implement planning systems for realizing advanced SCM, including systems for optimizing inventory management. We are planning to formulate a supply and demand plan based on demand forecasts made using statistical and AI techniques drawn from past results, etc., and to further link them to production planning at production sites. By realizing optimal supply and demand management based on data realized through reform to the planning process and the introduction of the aforementioned system, and by looking to reduce inventory while ensuring stable supply of products, we hope to see fewer days required for inventory turnover.