

HOKKO REPORT 2020

The 70th Anniversary of Hokko Chemical's Foundation

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Editorial Policy

Hokko Group issued Responsible Care reports in the past, and since FY 2018, we have issued the Hokko Report to also function as a company profile and integrated report with the aim of achieving a more comprehensive understanding of our group.

This Hokko Report describes our management policies, business activities, management plans, Environmental, Social, and Governance (ESG) activities, financial data, and other information.

Reporting Scope

Reporting period:
FY 2019 (Dec. 1, 2018–Nov. 30, 2019)
Some of the reported information includes activities conducted after December 2019.

Reporting scope:
Hokko Chemical Industry Group. However, quantitative data on health and safety and the environment cover only the main production and research facilities of Hokko Chemical Industry Co., Ltd., namely the Hokkaido Factory, Niigata Factory, Okayama Factory, and the Central Research Laboratories and Fine Chemicals Research Laboratories.

Referenced guidelines:
Environmental Reporting Guidelines 2018,
Japanese Ministry of the Environment

Published:
August 2020 (next release scheduled in August 2021)



Origin of the company emblem
symbolizing good harvests in Japan

Our company emblem is made of a “seed leaf” designed from the character for “north” (北) used in the corporate name of Hokko. The round shape (○) symbolizes the world, the universe, or perfection, and the seed leaf (🌱) suggests fledgling plants.

The seed leaf symbolizes our power to grow in the world like agricultural products that grow large with crop protection products and water.

Message from the President



Ken-ichi Sano
President

Marking the 70th Anniversary of the Company's Foundation

Hokko Chemical Industry, which was founded when the chemical synthesis division of Nomura Mining Co., Ltd. became an independent company on February 27, 1950, and this year, we mark the 70th anniversary of the company's foundation. When Hokko was founded, post-war Japan was facing severe food shortages, and in line with the strong belief that our social mission was to contribute to the stable supply of foodstuffs, we worked to expand the crop protection business. Since then, we have engaged in the Crop Protection Products Business without forgetting the company's fundamental stance since its foundation of maintaining harmony between our business activities and the natural environment.

Today, our Crop Protection Products Business is esteemed in Japan and overseas for our technological and development capabilities including the development of crop protection products that contribute to agriculture around the world. In addition, we developed the Fine Chemicals Business by adapting chemical synthesis technologies, such as the Grignard reaction, that we accumulated through the development of crop protection products, and currently supply numerous high-quality fine chemical products to diverse industrial fields.

We remain committed to handing down the aspirations embodied in our corporate philosophy of “Benefitting humankind through the provision to society of crop protection production and fine chemical products” while making steady progress for the coming 100 and 200 years.

We are implementing our HOKKO Growing Plan 2020, a three-year management plan covering the period from FY 2018 to FY 2020, as a first step toward achieving our stated targets of sales of 50 billion yen and ordinary income of 5 billion yen. These targets represent the corporate scale we aim to achieve in the near future as part of our long-term growth goals.

In FY 2019, we constructed a new production line at the Okayama Factory, acquired all shares of C. Murata & Co., Ltd., and took various other actions. As a result, we achieved year-on-year growth in sales, and although ordinary income was down from FY 2018, when it reached a record high, we achieved the second highest result. Moreover, current net income reached record highs in the five consecutive fiscal years to FY 2018, and the capital adequacy ratio has steadily improved. This fiscal year will be the final year of the HOKKO Growing Plan 2020, and we are promoting initiatives to achieve the targets for FY 2020.

Improving our corporate governance and Responsible Care activities* are major premises of maintaining this growth over the long term. We are working together with stakeholders and maintaining a strong awareness of compliance so that it can achieve sustained growth and improving our corporate value in the mid- to long term. As a chemical company, we must ensure safety and environmental considerations in all processes from development to manufacturing, distribution, product use, and disposal. We are therefore conducting Responsible Care activities. Through these activities, we are making ongoing improvements to the environment, safety, and health.

We hope that through this report, our stakeholders are able to deepen understanding of Hokko Group. We welcome your candid feedback as we pursue our future activities.

May 2020

* Responsible Care activities: In the chemical industry, companies that handle chemical substances voluntarily secure “environment, safety and health” in all processes from chemical substance development, manufacturing, distribution, use, final consumption, and recycling through to disposal, publicly release the results of those activities, develop the activities and communicate with society. These initiatives are called Responsible Care activities, and Responsible Care is sometimes abbreviated as RC in this report.

Corporate Philosophy

With the goal of benefitting humankind and the management keywords of “social contributions,” “the environment” and “technology,” we offer safe and reliable crop protection products that contribute to food security, and fine chemical products that broadly support industrial activities.

Basic Management Policy

Steadily implement our business plan to realize our Corporate Philosophy so as to achieve sustainable and stable growth, contribute to the development of domestic and overseas industries, and create a more affluent society. Under self-regulation from management led by our Board of Directors, we aim to improve our mid- to long-term corporate value and continue to be a company trusted by society.

Progress of the Three-Year Management Plan

We are reinforcing initiatives to achieve the targets of the HOKKO Growing Plan 2020 three-year management plan, which commenced in FY 2018.

HOKKO Growing Plan 2020 Three-Year Management Plan (Business Years 2018–2020) Challenge to Change — Embrace all change to open up the future

Basic Policy

Improve the revenue base of existing businesses

Strong core businesses driving profit higher

We will strengthen earnings in our existing businesses by shifting our business structure and improving and reforming work processes.

Expand business fields and domains

New fields creating sales

To ensure that we enter a growth track, we aim to use alliances and M&A to build new businesses and enter new fields and domains.

Maintain a sound financial constitution

Stable frame supporting growth

We will maintain sound financial standing that offers a balance of shareholder returns and investment in growth to support our sustained growth into the future.

Results of main activities in FY 2019

- Completed construction of production line no. 9 at Okayama Factory (November 2019), thereby creating structures for increased production
- Investigated future crop protection product manufacturing facilities for the purpose of increasing profit margins through a manufacturing innovation project
- Increased the pace of new agricultural chemical active ingredient development

- Acquired C. Murata & Co., Ltd. as a wholly-owned subsidiary (March 2019) and entered the textile materials field
- Acquisition of basic knowledge on the GMP*1 management system

- Five consecutive years of increased dividends
- 8.9% ordinary income margin
- 0.05 D/E ratio*2
- 60.7% capital adequacy ratio
- 11.2% ROE*3

*1 GMP: Good Manufacturing Practice. International standards related to pharmaceutical manufacturing and quality management.

*2 D/E ratio: Debt to equity ratio. Expresses the ratio of interest-bearing debt of the company to internal equity (shareholders' equity) with no repayment obligation. A lower ratio indicates greater financial stability. (D/E ratio = interest-bearing debt ÷ internal equity)

*3 ROE: Return on equity. An indicator expressing how effectively a company uses its internal equity to generate profits. (ROE = current net income ÷ internal equity × 100)

*4 RPA: Robotic process automation. Concept of using AI-based software, in other words a "robot," to automate and execute white-collar deskwork (mainly standardized processes).

*5 VOC (Volatile Organic Compounds): A general term for organic compounds that evaporate easily and become a gas in the atmosphere. VOCs are one of the causes of suspended particulate matter and photochemical oxidants.

Main activities in FY 2020

Expanding production structure

- Achieve stable operation of the production line no. 9 at Okayama Factory at an early stage
- Establish more specific crop protection product manufacturing facility concepts for implementation of existing plans based on future formulations

Development of new agricultural

- Expand candidate chemical compounds and take action for the development stage of leading chemical compounds

Establishing a sales growth trend

- Establish high-diffusion chemical formulation technologies that meet the labor-saving needs of growers
- Acquisition of GMP management system (conduct production in line with GMP management system)
- Investigate and demonstrate sales synergies with the textile materials business

Promotion of energy conservation

- Make energy use visible, mainly at factories, and promote energy conservation and cost cutting

Reinforcement of group governance

- Improve management efficiency and review business structures of affiliated companies and achieve synergy effects with affiliates

Promotion of the use of RPA*4

- Increase the introduction rate and use rate of RPA through business analysis

TOPICS: Details of FY 2019 activities

Construction of production line no. 9 at Okayama Factory completed

Construction of the production line no. 9 at Okayama Factory, which will expand production capacity of the Fine Chemicals Business, was completed on November 19, 2019. The new line achieved safe production with less manpower through automation and remote operation from a control room for liquid filling machines, rectification towers, and other equipment. A central computer consolidates operational data to ensure stable product quality.

With the new line coming on line, the Fine Chemicals Business production capacity at the Okayama Factory increased 14%, and it is positioned to make significant contributions to the company's future profitability.

Wastewater processing facilities were also improved and expanded in November 2019 to increase production capacity in preparation for the construction of a new line and increased production capacity of the Fine Chemicals Business in the future.



Production line no. 9



Wastewater processing facility

Zhangjiagang HOKKO Chemical Industry Co., Ltd. introduces environmental safety facilities

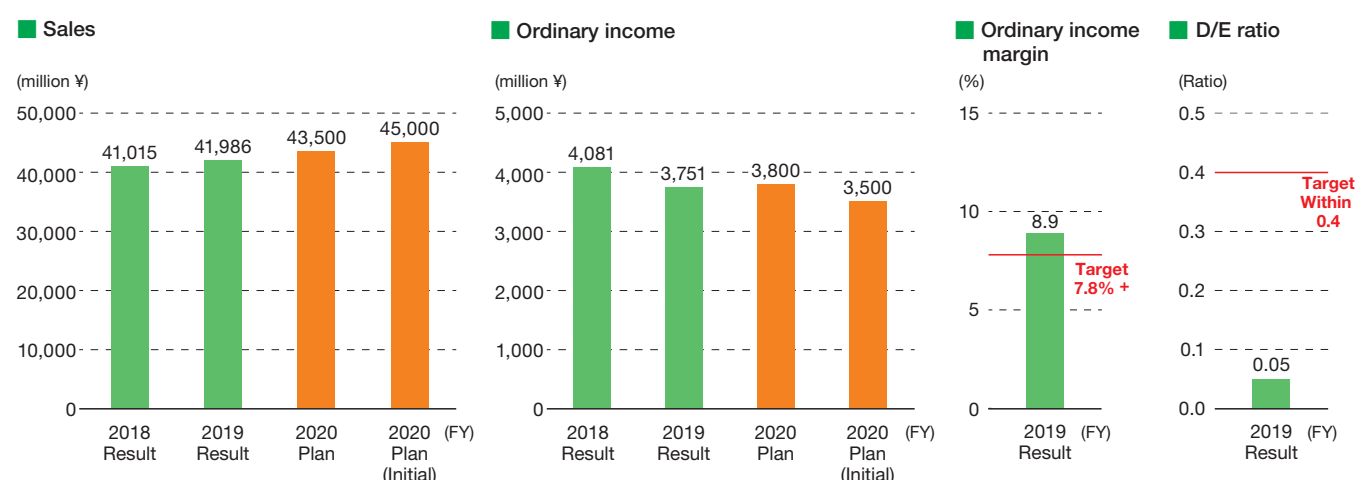
Zhangjiagang HOKKO Chemical Industry Co., Ltd. previously installed emissions processing equipment including activated charcoal to reduce emissions of VOCs*5, and in response to a tightening of emissions regulations, installed emissions processing equipment that uses a stored heat combustion method in May 2019.

With respect to safety, the company has also raised the levels of safe production and environmental preservation through automation and remote operation. On February 6, 2020, the company was presented an Award for the Introduction of Dual Accident Prevention Systems by Zhangjiagang City, in Jiangsu Province, China.



Stored heat combustion emissions processing equipment

Plan and Results



History of Hokko Chemical Industry

Hokko Chemical Industry was founded on February 27, 1950, when the pharmaceutical division of Nomura Mining Co., Ltd. became an independent company.

With our core technology of the Grignard reaction, we have developed the two main businesses of Crop Protection Products and Fine Chemicals.

1950 Founding



Rubeshibe Factory at time of establishment

The Rubeshibe Factory was established in the town of Rubeshibe, Tokoro District, Hokkaido (currently Kitami City, Hokkaido), where we first got our start. The factory was transferred from Nomura Mining Co., Ltd. when we were established, and continued to manufacture crop protection products until 1969 (the factory is now located in Takikawa City, Hokkaido).

Our trade name "Hokko" is a combination of two kanji characters, one meaning "north," which forms part of the name of Hokkaido where our business originally started, and the other meaning "to start" (a business).

Start of the Crop Protection Products Business

We inherited the technology built up at Nomura Mining Co., Ltd., and began manufacture and sales of our first product, Bordeaux Dust (copper fungicide).

Using the Grignard reaction technology for organic synthesis, we began to develop and manufacture crop protection products (fungicides) highly effective against rice blast.



Start of the Fine Chemicals Business

We were the first company in Japan to succeed at industrial production of organometallic compounds using the Grignard reaction. In addition to producing crop protection products using our expertise in reaction technology, we also explored other ways we could contribute to society and industry through chemical products. Our Fine Chemicals Business was born from this and is now one of our leading businesses.

Entry into the Textile Materials Business

C. Murata & Co., Ltd., which became one of our group companies in 2019, is a specialized trading company that deals in textile materials. It performs textile material development from raw materials and conducts original additional processing, and its products are used in a wide range of field including industrial textile materials used in automobiles and furniture as well as consumer textile materials for bags, shoes, apparel, and other products.

C. Murata and Hokko Chemical will integrate their respective skills, know-how, and networks to generate synergy effects, thereby expanding our business fields and areas and creating added value.

Crop Protection Products Business

Development of Kasugamycin

We launched Kasugamycin in 1965. It is an aminoglycoside antibiotic isolated from *Streptomyces kasugaensis*, which is produced by microorganisms discovered in the soil of Kasuga Grand Shrine in Nara Prefecture.

Kasugamycin is extremely safe and is still used today, more than 50 years after its market launch as a fungicide highly effective against diseases that affect vegetable and fruit tree crops. We have obtained pesticide registration for it in over 40 countries.



Fine Chemicals Business

Strengthened business development

The Fine Chemicals Business began operating as an independent division in 1969, when it began manufacturing raw materials for vinyl chloride stabilizers.

We began focusing on development of the Fine Chemicals Business in the 1970s, using Grignard reaction technology to grow this business into our second major business unit. In the late 1970s, the business had grown to reach close to 10% of our total sales.



Advanced manufacturing technology

In addition to maximizing the efficacy of crop protection products, we offer a wide variety of product types using advanced formulation technology so that crop protection products can be spread more safely and easily.



In the 1990s, we jointly developed with Meiji Seika Pharma Co., Ltd. Dr. Oryze seedling box formulation series using elution control technology that allows the product to be spread on seedling boxes before rice is transplanted and controls pests during the growing season after the rice is transplanted.

Development of Ipfen carbazone

We developed Ipfen carbazone as the herbicide Winner and launched it in 2014. It demonstrates a high level of safety in paddy rice and residual efficacy against *Echinochloa* sp., which is one of the most noxious weeds in rice paddy fields. We subsequently expanded our lineup to include Kachiboshi, Kimarite, Gyro, and Kairiki Z herbicide products.

Outside Japan, we registered it in South Korea in 2014 and began sales, and are conducting testing for registration in Asian countries including Taiwan, Vietnam, India, Thailand, and Indonesia.



Products for wide-ranging fields

We began manufacturing raw materials for synthetic fragrances and pharmaceutical raw materials and intermediates from the late 1970s and our leading product Triphenylphosphine (TPP), an organophosphorous ligand for catalysts, in the 1980s. Later, we began working with raw materials for functional polymers, and in the 2000s, we launched sales of raw materials for catalysts for automotive exhausted gas.

Today, we offer products for the resin, electronics materials, pharmaceutical, and agrochemical fields.



Global production structure

Backed by the steady performance of our business units, in 2002 we established the subsidiary Zhangjiagang HOKKO Chemical Industry Co., Ltd. in Jiangsu, China as a production base for Fine Chemicals products. A second production line was built in 2009.

In addition, production line no. 8 at the Okayama Factory was constructed in 2009 and production line no. 9 was completed in 2019 to increase production capacity. Further advances will be pursued in the future.



70th anniversary in 2020

We marked our 70th year in business on the anniversary of our founding in 2020.

Our group has continued to grow while undergoing many changes.

Looking ahead to our 100th anniversary in 30 years, we will tackle every change that comes while mobilizing the manufacturing traditions that have been passed down since our founding and open the doors to our future.

History

1950

Feb. Hokko Chemical Co., Ltd. founded, with the Head Office initially established in Chiyoda-ku, Tokyo. Rubeshibe Factory established in Rubeshibe, Tokoro-gun, Hokkaido (currently Kitami City), begin production and sale of crop protection products.

Dec. Head Office relocated to Sapporo, Hokkaido.

1953

Nov. Company name changed to Hokko Chemical Industry Co., Ltd. (present name).

Dec. Head Office relocated to Chiyoda-ku, Tokyo, and Okayama Factory established in Tamano City, Okayama Prefecture.

1954

Nov. Central Research Laboratories established in Kamakura City, Kanagawa Prefecture.

1961

Mar. Niigata Factory established in Shibata City, Niigata Prefecture.

1963

Apr. Hokko Vardal Co., Ltd. (currently HOKKO Sangyo Co., Ltd.) established.

1966

Nov. Central Research Laboratories relocated to Atsugi City, Kanagawa Prefecture (present location).

1967

Dec. Biei Hakudo Industry Co., Ltd. established.

1969

Jan. Head office relocated to Chuo-ku, Tokyo.

1970

Jan. Hokkaido Factory established in Takikawa City, Hokkaido (present location), relocated from the Rubeshibe Factory.

1972

Jan. Fine Chemicals Department established (currently the Fine Chemicals Business Group).

1982

Mar. Shizuoka Experimental Farm established in Sagara-cho, Haibara-gun, Shizuoka Prefecture (currently Shirai, Makinohara City).

1985

Sept. Hokkaido Experimental Farm established in Naganuma-cho, Yubari-gun, Hokkaido.

1987

May Listed on the First Section of Tokyo Stock Exchange.

1989

July Fine Chemicals Research Laboratories established within the grounds of Central Research Laboratories.

1991

Aug. HOKKO Pax, Ltd. established.

2002

Aug. Zhangjiagang HOKKO Chemical Industry Co., Ltd. established in Jiangsu, China.

2009

Dec. Multipurpose synthesis plant (production line no. 8) with a clean room constructed at Okayama Factory.

2012

July Munich Representative Office opens in Munich, Germany. Pilot scale laboratory constructed at Central Research Laboratories.

2015

Jan. Head Office relocated to Nihonbashi-Honcho, Chuo-ku, Tokyo (relocated Head Office registered in August).

2016

May HOKKO Chemical America Corporation established in North Carolina, USA.

Nov. Niigata Factory Branch Plant constructed in Seiro-machi, Kitakanbara-gun, Niigata Prefecture.

2019

Jan. Experimental farm established in Vietnam.

Mar. Acquired all shares of C. Murata & Co., Ltd. and made it a subsidiary.

Nov. Production line no. 9 constructed at the Okayama Factory.

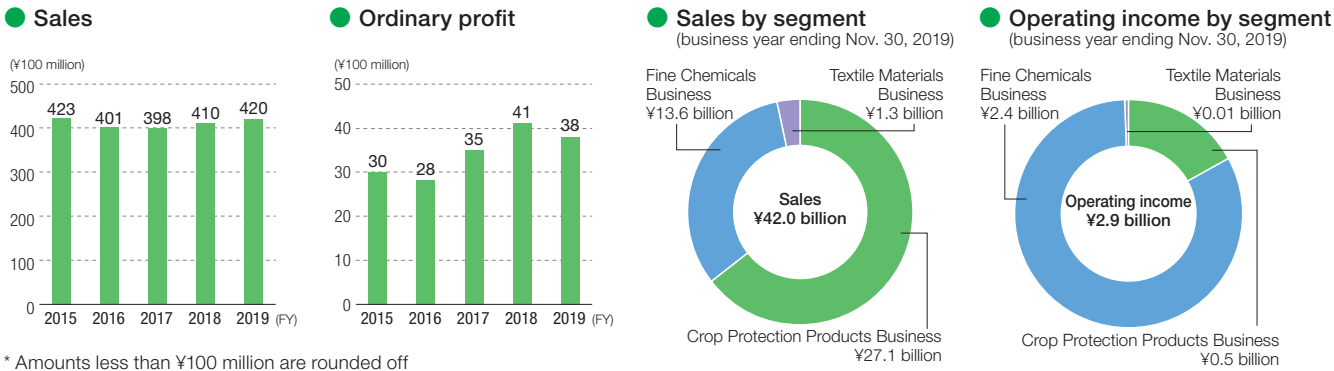
Company Overview

Corporate Profile

Corporate name: Hokko Chemical Industry Co., Ltd.
Head office: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-8341 Japan
Established: February 27, 1950
Capital: 3,214 million yen
Listed exchange: First Section of the Tokyo Stock Exchange
President: Ken-ichi Sano
No. of employees: Non-consolidated: 635
Consolidated: 768
(as of Nov. 30, 2019)

Business description:
Crop Protection Products Business
Manufacture and sale of insecticides, fungicides, herbicides, plant growth regulators, and related products
Fine Chemicals Business
Manufacture and sale of pharmaceutical and agrochemical intermediates, raw materials for electronics components, catalysts, raw materials for functional polymers, raw materials for fine ceramics, preservatives*, antifungal agents*, and related products*
* These products are sold only in Japan.
URL: <https://www.hokkochem.co.jp/english>

Financial Highlights (Consolidated)



Shareholder Information

● Stock Information (as of Nov. 30, 2019)

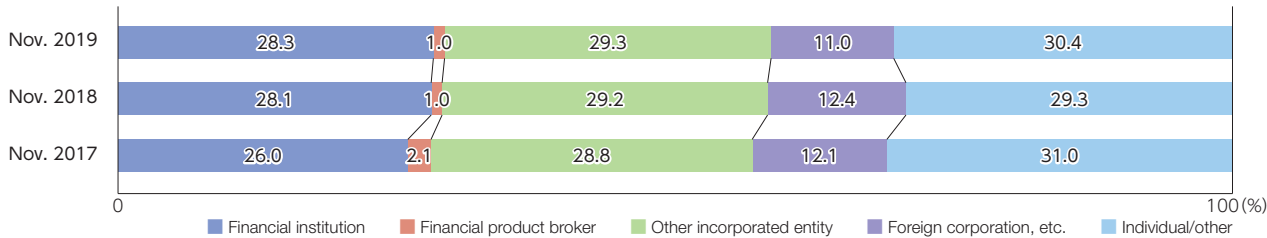
Total no. of issuable shares: 92,000,000
Total no. of issued shares: 29,985,531
No. of shareholders: 4,444

● Major Shareholders (as of Nov. 30, 2019)

Shareholder name	No. of held shares (1,000 shares)	Shareholding (%)
Nomura Shokusan Co., Ltd.	2,103	7.77
Sumitomo Chemical Co., Ltd.	1,968	7.27
Resona Bank, Limited.	1,352	4.99
Hokko Chemical Industry Employee Shareholding Association	1,302	4.81
Japan Trustee Services Bank, Ltd. (trust account)	1,217	4.49
The Master Trust Bank of Japan Ltd. (trust account)	913	3.37
The Norinchukin Bank	868	3.21
Nomura Holdings, Inc.	836	3.09
National Federation of Agricultural Cooperative Associations (ZEN-NOH)	801	2.96
Nomura Real Estate Holdings, Inc.	709	2.62

* Hokko holds 2,903,000 shares of treasury stock but is not included in the list of major shareholders. Shares of treasury stock are also not included in calculations of shareholding percentage.

● Shareholder Composition (Ratio of Shareholding)



SDGs and Hokko Group Activities

The Sustainable Development Goals (SDGs) are international goals to undertake from 2016 to 2030 stated in the 2030 Agenda for Sustainable Development, which was adopted at the United Nations Sustainable Development Summit of September 2015. The SDGs consist of 17 goals and 169 targets to achieve a sustainable world and represent a call to action for governments and companies. At Hokko Group, we are taking steps to achieve the SDGs through our Crop Protection Products Business and our Fine Chemicals Business.



SDGs and main related Hokko Group activities

SDG relevant to our business	Main related activities	Listed page
Goal 2: ZERO HUNGER End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Provide society with safe and reliable crop protection products contributing to a stable food supply.	pp.9-10
Goal 5: GENDER EQUALITY Achieve gender equality and empower all women and girls	Declare our respect for diversity in our Basic Compliance Policy and the Hokko Chemical Industry Group Code of Conduct. Take steps to increase the number of women job applicants and percentage of women managers.	pp.15-16 —
Goal 6: CLEAN WATER AND SANITATION Ensure availability and sustainable management of water and sanitation for all	Work to prevent water pollution.	p.20
Goal 7: AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable and modern energy for all	Promote energy conservation activities.	p.19
Goal 8: DECENT WORK AND ECONOMIC GROWTH Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Obtain OHSAS 18001 certification and promote occupational health and safety (currently making the transition to ISO 45001).	p.21
Goal 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Promote innovation through research and development on Crop Protection products and Fine Chemicals products.	p.13
Goal 12: RESPONSIBLE CONSUMPTION AND PRODUCTION Ensure sustainable consumption and production patterns	Take steps to appropriately manage chemical substances and waste and reduce their discharge. Issue the Hokko Report and publish information related to sustainability.	p.20, p.22 —
Goal 13: CLIMATE ACTION Take urgent action to combat climate change and its impacts	Establish a business continuity plan (BCP). Take steps to conserve energy and reduce CO ₂ emissions.	p.16 p.19
Goal 14: LIFE BELOW WATER Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Appropriately treat wastewater and reduce wastewater impacts.	p.20
Goal 15: LIFE ON LAND Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Conduct greening activities at our factories.	—

Business Description

Crop Protection Products Business

Hokko's products ensure crop protection from seed treatment to harvesting

In our Crop Protection Products Business, we have manufactured and sold safe and effective agricultural chemicals since our founding with the motto “Hokko's products ensure crop protection from seed treatment to harvesting.”

Agricultural Chemicals R&D

Crop protection products protect crops from diseases, pests, and weeds to support the safety and affluence of our food supply with the stable supply of agricultural crops. They also offer other benefits such as reducing agricultural labor and are indispensable to agriculture.

Developing crop protection products involves not only tests of agricultural chemicals' efficacy and non-target phytotoxicity, but also many tests related to safety. For this reason, it can take more than 10 years and tens of billions of yen to develop a new agricultural chemical. Of all the new chemical compounds, it is said that 1 in 160,000 gets registered as an agricultural chemical.

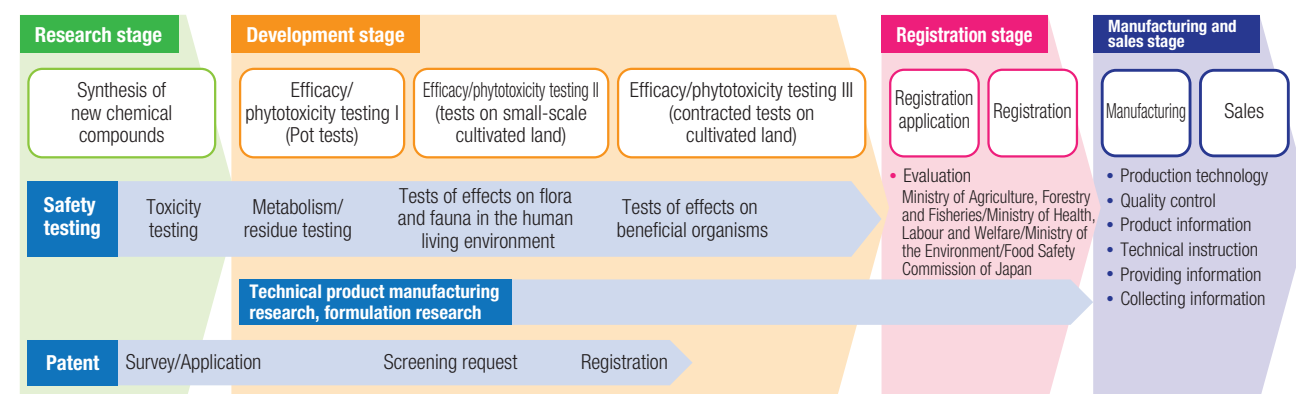
Starting with Kasugamycin (antibiotic fungicide for paddy rice and horticulture), which is highly effective at controlling the fungus that causes rice blast, a destructive disease found in cultivated rice, our development team has successfully developed many new active

components. Another is Ipfen carbazone (a paddy rice herbicide), which demonstrates a high level of safety in paddy rice and is effective against the lowland weed barnyard grass. We have earned a reputation for our expertise in chemical formulations that greatly contribute to improving pest and disease control technology and labor savings.



Test location

Manufacturing and Sales Process Flow from R&D



Production Structure

We operate three factories in Japan that are equipped with the latest facilities and technologies to produce highquality products. We give due consideration to both the surrounding environment and working conditions in our production operations and take all possible measures to prevent water, air, and other forms of pollution.

We also contract the manufacture of formulated products including some insecticides, fungicides, and herbicides as well as repacking.



Niigata Factory Liquid Plant No.1

Business in Japan Diverse product lineup and support structure

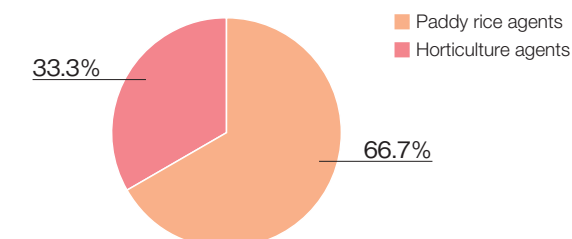
We sell more than 200 products including insecticides, fungicides, and herbicides for paddy rice, vegetable crops, and fruit orchards through JA branches nationwide in Japan. We have seven branches that serve as sales offices in Japan and sales representatives stationed in every prefecture to provide service at the local level.

We offer detailed information to distribution organizations such as JA, experimental farms, agricultural extension centers and other instructional organizations, and to the farmers who use our products to ensure that our crop protection products are used safely and effectively.

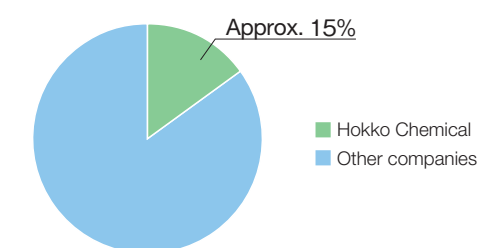


Leading products

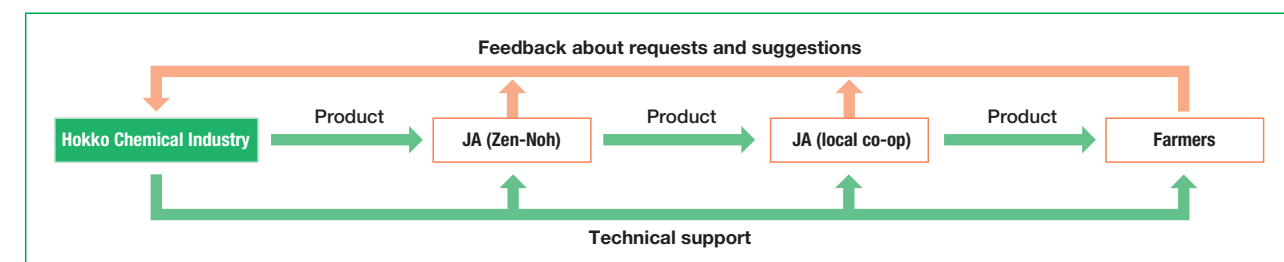
Breakdown by field of the company's crop protection product sales



The Company's share of domestic paddy rice agent shipments (estimated)



Support System



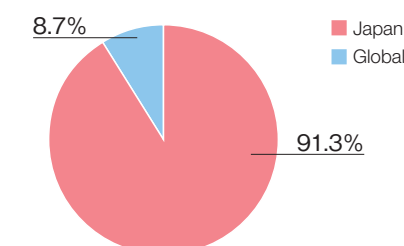
Global Business Operating business mainly in Asia and the Americas

We sell our original technical products*1 that we develop in markets in Asia and the Americas, primarily Kasugamycin, a fungicide and bactericide for paddy rice and horticulture, and ipfen carbazone, a paddy rice herbicide. To expand use of these products, we established HOKKO Chemical America Corporation in North Carolina, USA, in May 2016. This subsidiary is engaged in sales promotion in the North, Central, and South American markets.

We constructed the Niigata Factory Branch Plant in November 2016 as a production plant exclusively for Kasugamycin to build a stable supply structure for expanded exports. In January 2019, we established an experimental farm in Vietnam to conduct tests on the efficacy and harm of Ipfen carbazone for the purpose of developing crop protection products suited to tropical regions.

*1 Technical products: Industrial products used as the effective ingredients in crop protection products

Japan and Global Sales Mix



Leading products sold globally

Kasugamycin for the USA

* All graphs on p.10 are based on non-consolidated data from FY 2019 actual results.

Fine Chemicals Business

Contributions to the development of industry and society by building upon original technologies

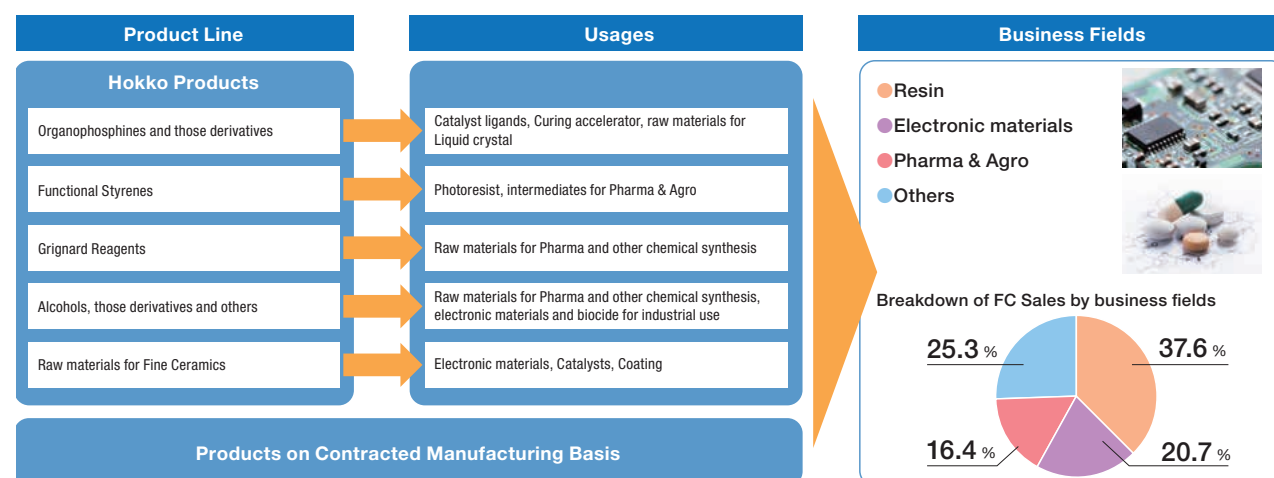
Our Fine Chemicals Business supplies a wide range of business fields with products made using its core technology represented by Grignard reaction.

Hokko Fine Chemicals Products

We use the generic name of “fine chemicals” for highvalue added chemicals produced in small quantities versus mass-produced chemical products. To meet the needs of society and markets, our Fine Chemicals Business Unit supplies high purity, high performance, and high value-added products made using our original

manufacturing technology based on the Grignard reaction. These products are used in resins, electronics components, pharmaceuticals & agrochemicals, and other fields to support the development of industry and affluent living.

Business Description



Hokko Technology Grignard Reaction

The Grignard reaction was developed in 1900 by the French chemist Victor Grignard. It is the generic name for reactions involving an organomagnesium halide compound (Grignard reagent). Grignard reagents are widely used in industry, but reaction temperature control

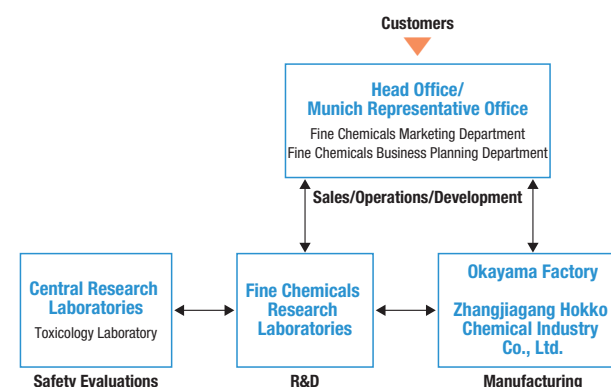
during reagent synthesis is challenging, and few companies conduct large-scale synthesis of Grignard reagents. We meet a wide range of customer needs using our world-leading technologies and production scale.

Fine Chemicals R&D, Manufacturing, and Sales System

We conduct integrated research and development through the coordinated efforts of our Fine Chemicals Marketing Department and Fine Chemicals Business Planning Department at the Head Office and the Fine Chemicals Research Laboratories.

Our Okayama Factory engages in efficient production with a total of nine workshops, including clean rooms able to produce pharmaceutical intermediates and raw materials for electronic materials. We are also developing our international operations, with our subsidiary Zhangjiagang Hokko Chemical Industry Co., Ltd. in China the second fine chemicals production site after the Okayama Factory.

Fine Chemicals Product Research, Development, and Manufacturing Processes

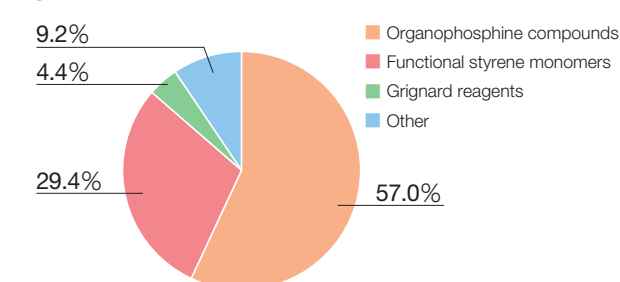


Manufacture and Sale of Hokko Products and Contracted Manufacturing

Hokko Products

Based on our synthesis technologies and experience in organometallic compounds built up over 70 years since our founding, we have developed numerous products using the Grignard reaction as the key technology. Those fine chemical products include electronic materials such as a curing accelerator for epoxy molding compounds, organic catalysts, pharmaceutical raw materials and intermediates, and monomers for functional polymers.

Hokko Product Sales Mix



Leading Products

Organophosphine compounds

TPP... $(\text{C}_6\text{H}_5)_3\text{P}$
 TTBP... $(\text{tert-C}_4\text{H}_9)_3\text{P}$
 TPPO... $(\text{C}_6\text{H}_5)_3\text{P}=\text{O}$
 TPP-PB... $(\text{C}_6\text{H}_5)_4\text{P}^+\text{Br}^-$
 DPPE... $(\text{C}_6\text{H}_5)_2\text{PCH}_2\text{CH}_2\text{P}(\text{C}_6\text{H}_5)_2$
 Crophos... $(\text{tert-C}_4\text{H}_9)_2\text{PCH}_2\text{CH}=\text{CHCH}_3$
 m-Crophos... $(\text{tert-C}_4\text{H}_9)_2\text{PCH}_2\text{CH}=\text{C}(\text{CH}_3)_2$
 Xantphos, DPEphos, Amphos, DPPF

Functional styrene monomers

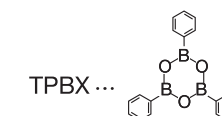
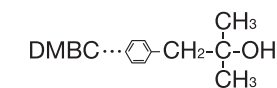
PCST... $\text{Cl}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$
 PTBST... $\text{CH}_3-\text{C}(\text{CH}_3)_2-\text{O}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$
 PVBA... $\text{HOOC}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$

Grignard reagents

Grignard reagents... RMgX

Alcohols, derivatives, others

4P1OL... $\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{CH}_2\text{OH}$
 3B1OL... $\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{OH}$



Hokstar, Hokcide
 ...Organonitro sulfur compounds

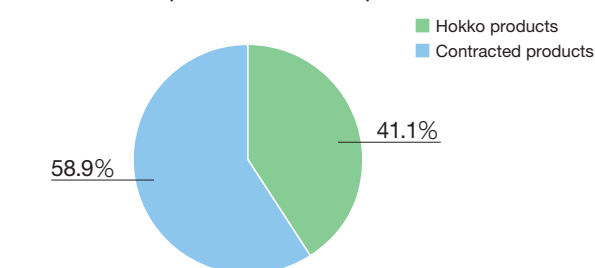
Raw materials for fine ceramics

HZ-NB... $(\text{n-C}_4\text{H}_9\text{O})_4\text{Zr}$
 HZ-TB... $(\text{t-C}_4\text{H}_9\text{O})_4\text{Zr}$
 $(\text{C}_2\text{H}_5\text{O})_5\text{Nb}$
 $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnOxide}$

Contracted Manufacturing

In addition to our own products, we also contract manufacturing based on proposals using Hokko technologies and Hokko raw materials. Leveraging our advanced technologies and know-how built up over many years, we meet customers' detailed needs and requirements using our production system consisting of multipurpose manufacturing units of various sizes equipped with the latest facilities.

Sales Mix (Hokko/contracted)



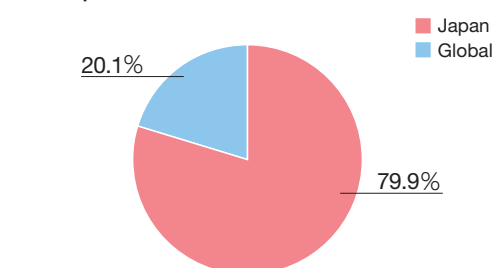
Global Marketing

We opened Munich Representative Office to serve as a marketing base in Europe. Through this office, we are able to more quickly respond to our customers in Europe and aim to capture new demand.



Munich Representative Office (building housing the office)

Japan and Global Sales Mix



* All graphs on pp.11-12 are based on non-consolidated data from FY 2019 actual results.

Research & Development

At our Central Research Laboratories and Fine Chemicals Research Laboratories, we are improving our R&D capabilities and promoting R&D under the slogan of “Continuous Development for New Technology: Challenge to Innovation.”

Central Research Laboratories (Crop Protection Products Business)

- Location: Atsugi City, Kanagawa
- Site area: 22,000 m²*
- No. of employees: 129* (as of Nov. 30, 2019)

* Includes the Fine Chemicals Research Laboratories



Central Research Laboratories and Fine Chemicals Research Laboratories

The Central Research Laboratories opened in 1966 after relocating laboratories from Ofuna, Kamakura City, Kanagawa Prefecture. It is involved in creation of new technical products for crop protection products, developing new crop protection products, and providing technical support for sales. In 2016, it obtained certification of compliance with standards for proper testing of toxicity and residues of agricultural chemicals (Good Laboratory Practice [GLP] for Agricultural Chemicals).



Experimental Farms

Hokkaido Experimental Farm

- Location: Yubari-gun, Hokkaido
- Site area: 19,700 m²
- Established: 1985



Shizuoka Experimental Farm

- Location: Makinohara City, Shizuoka
- Site area: 23,800 m²
- Established: 1982



Conducts experiments to develop crop protection products meeting local needs, mainly using cultivated land designated for experiments. The Atsugi Experimental Farm is attached to the Central Research Laboratories.

Fine Chemicals Research Laboratories (Fine Chemicals Business)

The Fine Chemicals Research Laboratories was established in 1989 on the grounds of the Central Research Laboratories to augment the R&D team at our Atsugi research facilities in conjunction with expansion of our Fine Chemicals Business. It conducts research and development on fine chemicals, raw materials for fine ceramics, and antifungal agents.



Manufacturing

We are adding to our production facilities and increasing efficiency at our factories, building a robust production structure.

Hokkaido Factory (Crop Protection Products Business)

- Location: Takikawa City, Hokkaido
- Site area: 53,000 m²
- No. of employees: 47 (as of Nov. 30, 2019)

Our Rubeshibe Factory, located in Rubeshibe, Hokkaido, where we first got our start, was not located near the main rice-producing region of Hokkaido. We relocated the Hokkaido Factory to the major rice-producing region of Takikawa and completed the factory in 1970. The Hokkaido Factory is our leading crop protection product manufacturing facility in Hokkaido.



Niigata Factory (Crop Protection Products Business)

- Location: Shibata City, Niigata
- Site area: 128,000 m²
- No. of employees: 88 (as of Nov. 30, 2019)

We established the Niigata Factory in 1961 in one of the leading grain-growing regions in Japan as the first crop protection product factory located along the Japan Sea. We built the Niigata Factory Branch Plant in 2016 for the purpose of creating a stable supply structure to expand exports of Kasugamycin, our original technical product.



Okayama Factory

(Crop Protection Products Business/Fine Chemicals Business)

- Location: Tamano City, Okayama
- Site area: 184,000 m²
- No. of employees: 253 (as of Nov. 30, 2019)

As the first factory attracted by Okayama Prefecture, the Okayama Factory was constructed in 1953 for the purpose of integrated production of crop protection products starting from synthesis of agricultural chemical technical products. In addition to crop protection products, the factory currently produces raw materials for electronics components and fine chemical products including pharmaceutical intermediates.



Zhangjiagang HOKKO Chemical Industry Co., Ltd. (Fine Chemicals Business)

- Location: Zhangjiagang City, Jiangsu Province, China
- Site area: 165,000 m²
- No. of employees: 94 (as of Nov. 30, 2019)

We established the wholly owned subsidiary Zhangjiagang HOKKO Chemical Industry in 2002 as a manufacturing facility exclusively for fine chemical products. A new plant was added in 2009. In cooperation with the Okayama Factory, Zhangjiagang HOKKO Chemical Industry is part of our global production structure.




Responsible Care Management

As a company that handles chemical substances, internally we prioritize ensuring safety, health and the protection of the environment from product development through to product disposal, publicly releasing the results of these efforts, and deepening understanding through mutual dialogue.

Basic Policy on the Environment, Safety and Health

We conduct Responsible Care (RC) activities, a voluntary management initiative of the chemical industry to protect the environment and ensure safety and health, based on our Basic Policy on the Environment, Safety and Health and our Responsible Care Activity Policy. These activities encompass the areas of environmental protection, occupational health and safety, process safety and disaster prevention, distribution safety, chemical products safety, and communication with the public.

Basic Policy for the Environment, Safety and Health



Revision date: August 1, 2012
(Established in September 1996)

We are committed to giving the highest priority to the following initiatives for environment protection, safety and health throughout our business activities, including R&D, manufacturing and sales.

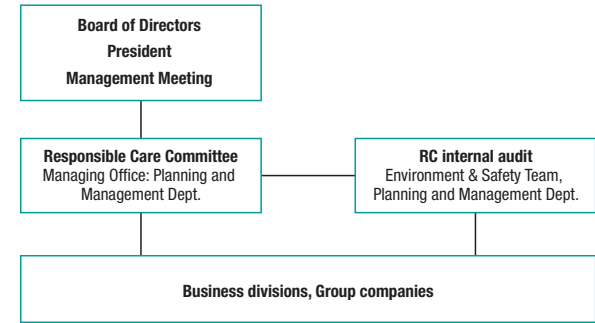
1. We ensure the safety of local communities and of our employees by keeping our operations free of occupational incidents and accidents.
2. We ensure the safety and health of our stakeholders, including our customers, general consumers, our logistics partners and our employees, through our gathering and organizing of the latest safety information on chemical substances and products, and by providing it to the parties concerned.
3. We provide products that can be used by our customers with satisfaction and assurance.
4. We strive to reduce our environmental impact throughout the product life cycle, from development to disposal.

The personnel at all of our divisions recognize the importance of our basic policy and strive to make improvements in a continuous way, as well as complying with laws and regulations.

Ken-ichi Sano
President

HOKKO CHEMICAL INDUSTRY CO., LTD.

Responsible Care Promotion Structure



ISO 9001, ISO 14001, ISO 45001 Certifications

Location	Certification Date			
	ISO 9001	ISO 14001	ISO 45001	
Hokko factories	Hokkaido Factory	Dec. 1995	Jan. 2000	—
	Niigata Factory	Jan. 1995	Mar. 1999	—
	Okayama Factory	Jan. 1995	Jan. 2000	Apr. 2020
Group companies	HOKKO Pax, Co., Ltd., Okayama Office	—	Jan. 2000	Apr. 2020
	Zhangjiagang HOKKO Chemical Industry Co., Ltd.	Nov. 2007	Dec. 2007	—

* OHSAS 18001 certification was obtained by the Hokkaido Factory in April 2006 and by Niigata Factory in February 2006. Both factories are currently making the transition to ISO 45001.

RC Internal Audits (Environment & Safety Audits)

The Environment & Safety Team in the Head Office Planning and Management Department regularly conducts RC internal audits of our factories, laboratories, and Group companies. The locations carry out systematic improvements based on the guidance and instructions received in audits.



Responsible Care Committee (Head Office)

RC internal audit (Hokkaido Factory)

Responsible Care Promotion Structure

We have established the Responsible Care Committee, with the President serving as committee chair and officers in charge of business groups and others serving as committee members, to oversee our companywide RC activities.

The Responsible Care Committee deliberates on our Basic Policy on the Environment, Safety and Health and related targets and plans. Business locations and group companies also conduct RC activities and establish a system corresponding to their operations.

Our factories have obtained certifications in quality management (ISO 9001), environmental management (ISO 14001) and occupational health and safety management (OHSAS 18001, ISO 45001).

Targets and Results of Responsible Care Activities

We set targets for environment and safety issues and conduct an ongoing cycle of improvement activities. We also conduct and publicly release environmental accounting reports to evaluate the costs and benefits of our environmental protection measures.

FY 2019 Responsible Care Activity Results and FY 2020 Targets

Item	FY 2019 Target	Result	Self-evaluation	FY 2020 Target
Environmental protection	Reduce environmental load Companywide energy management and energy conservation	Unit energy consumption YoY: -4.4% (p. 19)	○	Reduce environmental load Companywide energy management and energy savings
	Manage wastewater at or below our voluntary management criteria	Additional wastewater processing facilities were installed at the Okayama Factory. Management at or below standards (p. 20)	○	Manage wastewater at or below our voluntary management criteria
	Reduce and properly treat waste	Total waste produced YoY: -5.9% (p. 20)	○	Reduce and properly treat waste
Occupational health and safety	Eliminate occupational accidents Improve work environments	Lost time injuries: 0 (p. 21)	○	Eliminate occupational accidents Improve work environments
Process safety and disaster prevention	Eliminate plant accidents	Plant accidents: 0	○	Eliminate Plant accidents
Distribution safety	Ensure distribution safety	Accidents in distribution: 0	○	Ensure distribution safety
Chemical product safety	Ensure the chemical product safety	Serious product accidents: 0	○	Ensure the chemical product safety
Social dialogue	Public release of information Exchanges with local communities	Publishing HOKKO REPORT 2019 Community exchanges at business locations (p. 24)	○	Public release of information Exchanges with local communities

Environmental Accounting Scope: Non-consolidated Reporting period: Dec. 1, 2018–Nov. 30, 2019

Environmental conservation cost (Unit: million ¥)

Category		Key Activity and the Outcome	Investment amount	Cost amount
1	Environmental conservation costs to control environmental impacts that result from key business operations within the business area (business area costs)		310	316
	Breakdown	Pollution prevention costs	217	128
		Global environmental protection costs	86	0
		Resource circulation costs	7	189
2	Environmental conservation costs to control environmental impacts that result from key business operations upstream or downstream (upstream/downstream costs)	Collection and proper disposal of used products, distribution accident prevention measures, etc.	0	7
3	Environmental conservation costs stemming from administration activities (administration costs)	Implementation and maintenance of the environmental management system, disclosure of environmental information, monitoring of environmental impacts, environmental training of employees, greening measures, etc.	5	71
4	Environmental conservation costs stemming from R&D activities (R&D costs)	R&D to curtail environmental impacts, evaluation and testing expenses, etc.	0	46
5	Environmental conservation costs stemming from societal activities (societal activity cost)	Disclosure of information to local communities, etc.	0	1
6	Costs incurred for dealing with environmental degradation (environmental remediation costs)	—	0	0
Total			315	441

* Investment amount: Capital investment for environmental conservation
* Cost amount: Depreciation expenses, maintenance and administration expenses for environmental conservation
* Totals may not match due to rounding.

Environmental Conservation Benefit

Environmental conservation benefit categories	Environmental performance indicators (units)	FY 2018	FY 2019	YoY Change
Environmental Conservation Benefit Related to Resources Input into Business Activities	Total energy input (kL)	11,754	11,327	-427
	Amount of input water resources (clean water) (1,000 m³)	399	425	26
Environmental Conservation Benefit Related to Waste and Environmental Impacts Originating from Business Activities	CO ₂ emissions (t-CO ₂)	31,735	29,344	-2,391
	COD emissions (t)	12.8	16.6	3.8
	Total amount of discharged waste, etc. (t)	6,228	5,852	-376
	Recycled amount (t)	3,969	4,068	99
	Amount of final waste disposal (t)	547	435	-112

Economic Benefit Associated with Environmental Conservation Activities (Unit: million ¥)

Benefit Details	Amount
Sale of valuable articles	9

* Calculated in conformance with the Environmental Accounting Guidelines 2005 published by the Japanese Ministry of the Environment and the Environmental Accounting Guidelines for Chemical Companies published by the Responsible Care Committee of the Japan Chemical Industry Association.
* Some data from FY 2018 was reviewed and corrected.

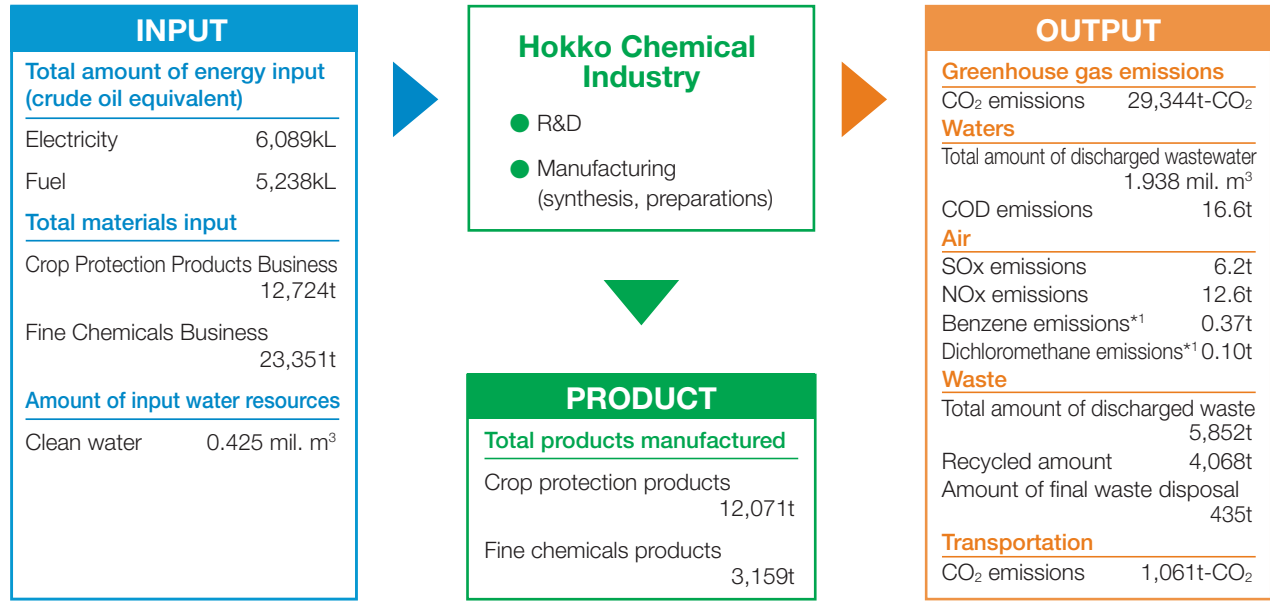
Environmental Protection

We calculate the amounts of energy and resources we use, product production volumes, and emissions of substances with environmental load as part of our business activities, and proactively work to save energy, reduce chemical substance emissions, and properly manage waste to protect the environment.

* Some data from FY 2018 was reviewed and corrected.

Hokko Chemical Industry Business Activities, Input, and Output

(Reporting scope: Non-consolidated Reporting period: Dec. 1, 2018–Nov. 30, 2019)



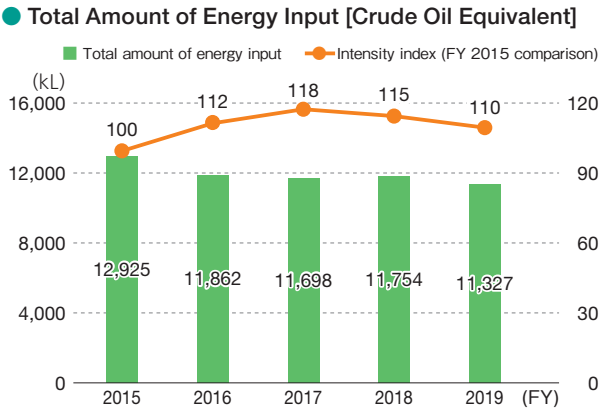
*1 Of the hazardous substances that contaminate the air (substances requiring priority action), only substances we emit in large amounts are listed.

Conserving Energy

We have put in place a companywide energy management organization, revised our facilities and manufacturing processes, and installed LED lights and other energy-conserving facilities as part of our energy-conserving activities.

In FY 2019, our total energy input decreased 3.6% compared with FY 2018, and our unit energy consumption*2 decreased 4.4%.

*2 Unit energy consumption expresses the intensity index against the FY 2015 baseline of 100 by calculating the total intensity rate of change from the weighted average of the intensity rate of change of each location.

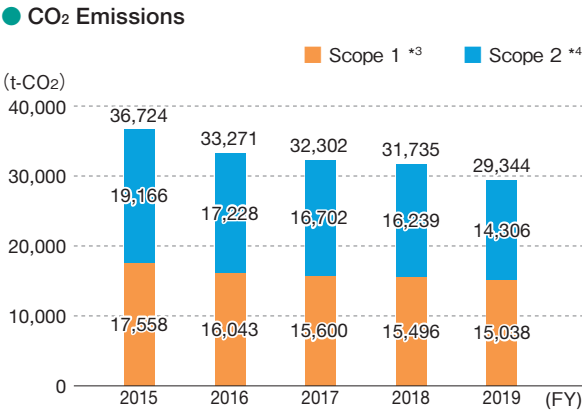


Reducing Greenhouse Gas Emissions

The greenhouse gas CO₂ is emitted when using energy and incinerating waste. We are working to reduce our CO₂ emissions by taking actions to conserve energy. We reduced our CO₂ emissions in FY 2019 by 7.5% compared with FY 2018 as a result of lower energy consumption.

*3 Scope 1: Direct emissions from the combustion of fuel and the like

*4 Scope 2: Indirect emissions in conjunction with the use of electricity supplied by other companies

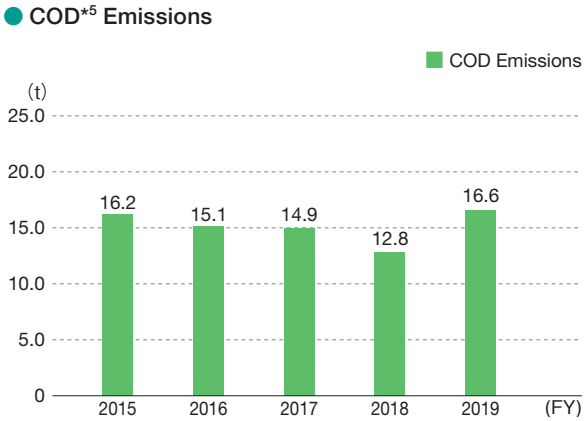


Preventing Water Pollution

Wastewater generated in manufacturing processes is discharged to river and ocean waters after removing water contaminating substances through such treatment processes as neutralization, use of activated sludge, flocculation, and precipitation. We appropriately monitor and measure emissions based on laws and other regulations. Wastewater processing facilities at the Okayama Factory were expanded in FY 2019, resulting in the stabilization of treated water quality.

*5 COD: Chemical Oxygen Demand

One measure of wastewater contamination by organic matter, with a higher number indicating higher organic matter pollution. COD emissions are calculated by multiplying average COD by annual wastewater emissions.



Appropriate Waste Management

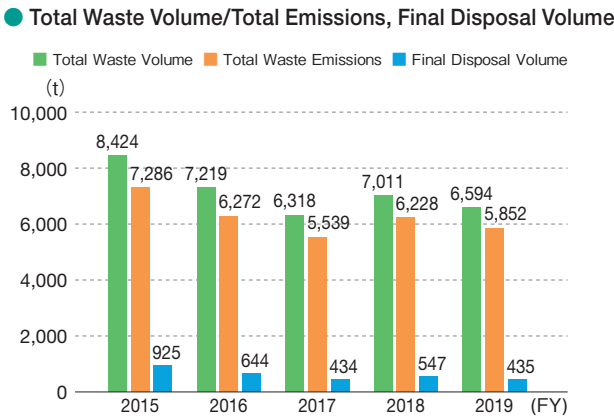
We appropriately treat waste and promote the 3 R's (Reduce, Reuse, Recycle).

Of the waste that we generate, we incinerate waste able to be incinerated at our locations in accordance with disposal standards.

We contract treatment of waste that cannot be treated at our locations to treatment providers, and select reliable providers by conducting local inspections and other measures.

Our total volume of generated waste*6 in FY 2019 decreased 5.9% compared with FY 2018.

*6 Waste, etc.: Waste and secondary materials generated during product manufacturing (including materials with value such as waste paper and metal)



Data by Location

FY 2018 & FY 2019 Environmental Load Data by Location

Item	Hokkaido Factory		Niigata Factory		Okayama Factory		Central Research Laboratories/ Fine Chemicals Research Laboratories		
	2018	2019	2018	2019	2018	2019	2018	2019	
Total energy input (crude oil equivalent)	(kL)	214	230	782	868	10,147	9,576	610	654
Waterworks consumption	(1,000 m³)	3.8	3.7	16.1	18.0	370	393	9.2	10.1
CO2 emissions	(t-CO2)	554	583	1,576	1,749	28,585	25,945	1,020	1,067
SOx emissions	(t)	0.4	0.2	0.0	0.0	6.2	5.9	0.0	0.0
NOx emissions	(t)	0.1	0.2	0.1	0.2	12.1	11.7	0.9	0.5
Total wastewater	(1,000 m³)	3.8	3.7	13.2	11.9	2,398	1,915	5.7	7.1
COD emissions	(t)	0.02	0.02	0.02	0.01	12.7	16.6		
Total waste emissions	(t)	92	96	397	422	5,537	4,986	96	85

Occupational Health and Safety, Process Safety and Disaster Prevention

With safe operations and elimination of occupational accidents given highest priority, we conduct independent health and safety activities as part of our efforts to create workplace environments that are safe and easy to work in.

Occupational Health and Safety Initiatives

With safe operations and elimination of occupational accidents given highest priority, we have put in place a health and safety management system and conduct a range of activities related to health and safety including activities to predict risk (called “KY”) and 5S (translated as “Sort, Set in order, Shine, Standardize, Sustain”) activities. All of our factories have also obtained OHSAS 18001 certification, an international standard for occupational health and safety management systems. We are currently making the transition to ISO 45001.

Education and Training

We provide education on the health and safety information employees need to know in operations, including our basic approach to safety and safe handling of chemical substances, and promote obtaining of qualifications required in operations. To prepare for emergency situations, we conduct disaster preparedness drills and education in the unlikely event of a fire, chemical substance leak, natural disaster, or other type of disaster. In addition to the health and safety education we have conducted to date, we also conduct trainings on sensing danger using simulations of actual dangers to improve employees’ ability to perceive danger.



Emergency drills
(Central Research Laboratories)



Emergency drills
(Hokkaido Factory)



Trainings on sensing danger
(Niigata Factory)

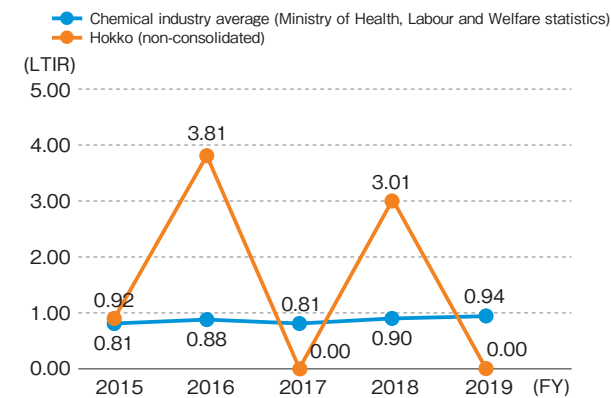


Trainings on sensing danger
(Okayama Factory)

Occurrence of Occupational Accidents

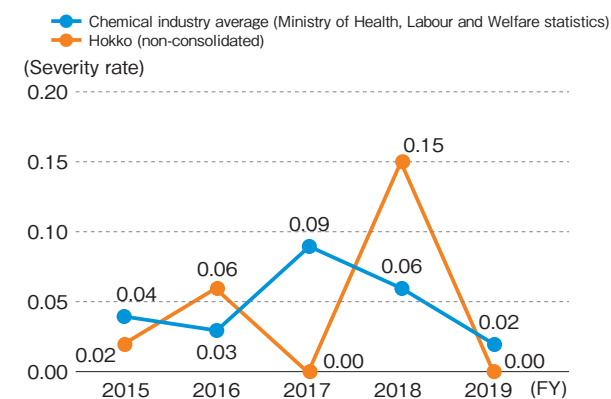
In FY 2019, we achieved zero incidents of lost time injuries. Going forward, we will continue to prevent accidents by implementing occupational health and safety measures.

Lost Time Injury Rate (LTIR)



LTIR: Indicator of the frequency of lost time injuries
(Number of lost time injuries) ÷ (Total working hours) × 1 million

Severity Rate



Severity rate: Indicator of the severity of occupational accidents
(Number of work days lost) ÷ (Total working hours) × 1,000

Chemical Product Safety, Distribution Safety

Each business location takes measures to properly handle and manage chemical substances. We clearly specify the product properties and handling methods for the relevant parties and update information as necessary.

Chemical Substances Management

Chemical substances are useful and indispensable to our way of life, but their improper management can lead to environmental contamination and accidents, and carries the risk of adversely affecting human health and ecosystems.

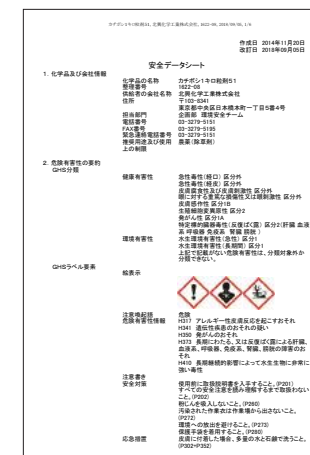
We comply with laws and regulations in handling chemical substances. We also collect safety information, conduct safety tests and risk assessments, and implement appropriate management of chemical substances corresponding to the product stage (R&D, manufacturing, etc.).

Safety Data Sheets

We prepare Safety Data Sheets (SDSs), which list important information for the safe handling of chemical products, for all of our products, and use them when providing information to customers and conducting employee education. SDSs for our leading crop protection products can be found on our website.



<https://www.hokkochem.co.jp/business/pesticide/product-sds>



Safety Data Sheet (SDS)

Management of Electrical Machinery Containing PCBs

Based on the Act on Special Measures for Promotion of Proper Treatment of Polychlorinated Biphenyl (PCB) Wastes, transformers and condensers containing polychlorinated biphenyl (PCB) stored at our facilities are reported to the authorities and strictly managed as industrial waste requiring special management. We are disposing of these electrical devices containing PCB in accordance with legislation.

Distribution Safety

Our factories periodically hold consultations with shipping companies to mutually coordinate and implement environmental and safety initiatives in distribution. To prepare for the unlikely event of an accident while products are being shipped, drivers carry Yellow Cards*1 with them listing information such as who to contact and what measures to take in an emergency. To complement the Yellow Card system, we have introduced the Container Yellow Card labelling system*2, which lists the guide number*3 and UN number*4 on cardboard boxes.



Yellow Card



Container Yellow Card
(example on cardboard box)

*1 Yellow Card (emergency contact card): Yellow paper printed with instructions for the driver, fire fighters, police, and other relevant parties to take in the event of an accident. The instructions are given the name “yellow card” because they are printed on yellow paper to make them easy to find in an emergency.

*2 Container Yellow Card (labelling system): To supplement the Yellow Card system, cardboard boxes and product labels list the guide number and UN number.

*3 Guide number: In the emergency response guidelines published by the Japan Chemical Industry Association, chemical substances are classified into 62 groups and assigned numbers based on their common hazards and emergency response measures. In an emergency, information about the emergency response measures to take can be obtained from the guide number.

*4 UN number: Four-digit numbers that identify hazardous materials, assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and published in the Recommendations on the Transport of Dangerous Goods (Orange Book).

With Stakeholders

Our corporate activities would not be possible without the understanding and support of our stakeholders. Through various forms of engagement with stakeholders, we aim to build upon our trustworthy relations.

With Customers

We work to ensure safety and product quality in all the stages of research and development, manufacturing, logistics, and sales. We listen to feedback from customers and strive to improve our technologies and quality.

Quality Assurance Structure

To stably supply products of excellent quality able to satisfy customers, our factories have obtained ISO 9001 certification, the international standard for quality management systems. After rounds of examinations for maintenance and updates by the certifying body, we obtained the 2015 version of the certification in 2018. We conduct an internal quality audit once a year to confirm whether the management system at our factories is being appropriately and effectively implemented, and factory managers periodically make revisions to the system.

In the Fine Chemicals Business group, we have set up the Quality Inspection Team and the Quality Assurance Team independent from the Production Department to augment our quality assurance structure.

Communication with Customers

Sales staff in the Crop Protection Products Business group in Japan have obtained the JGAP*1 instructor qualification to better propose products that meet customer requests.

The Fine Chemicals Business group actively exhibits at trade fairs and other events to introduce our products and technologies.

*1 JGAP: Japan Good Agricultural Practice. An agricultural production management method for the purpose of ensuring the safety of agricultural crops.



At an exhibition

With Shareholders and Investors

We established a disclosure policy, disclose information appropriately and in a timely manner, and strive to hold constructive dialogue with shareholders and investors.

General Meeting of Shareholders

We position the general meeting of shareholders as an important opportunity to engage in direct communication with all of our shareholders. At the general meeting of shareholders, we use visuals to supplement explanations of our business situation, business plans, and strategy. The notice of convocation of the general meeting of shareholders is released and sent at an early date. We also set up the “Hokko Now” corner, where we introduce our business performance over the last year as well as new products and other topics of note as another way to expand our information sharing.

Management Plan and Financial Closing Briefings

We hold briefings for institutional investors and analysts to discuss our three-year management plan and financial closing. We also aim to build good trustworthy relations with investors through regularly held IR meetings.

Expanding Our Website

We release timely and appropriate IR-related information, including about our management policy and strategy, business performance, and financial information, on our website to deepen understanding for the Hokko Group.

We launched the “Quick and Easy HOKKO” website (in Japanese) to promote understanding of our origins, the Crop Protection Products Business, and the Fine Chemicals Business using easy-to-understand graphics and photos.



<https://www.hokkochem.co.jp/iir/>

With Local Communities

Through offering tours and hands-on workshops and participating in volunteer activities, our business locations seek out opportunities for communication with local residents.

Offering Tours and Hands-on Workshops

Our locations give tours and hands-on workshops and seminars for students. Our factories provide briefings on product manufacturing processes, safety and health, and environmental conservation efforts. Our laboratories provide briefings on a range of tests to validate safety and efficacy that are required in the development of crop protection products.



Offering factory tours (Hokkaido Factory)



Receiving high school student interns (Hokkaido Factory)

Social Contribution Activities, Communication with Communities

Our locations open their facilities such as baseball grounds to the community. We participate in cleanups around our business locations, collect waste materials from the community, and participate in various community events.

We also take part in blood drives, with a mobile blood drive visiting our factories each year. Our laboratories have concluded memorandums with local governments to provide use of our sites as emergency shelters in the event of a disaster. When Typhoon Hagibis (Typhoon no. 19) struck in October 2019, we offered the use of meeting rooms as temporary evacuation shelters for local residents in accordance with an agreement.



Cleanup campaign (Hokkaido Factory)



Cleanup campaign (Niigata Factory)

With Employees

We are developing human resources to tackle new fields and creating workplaces where employees can demonstrate their talents to achieve sustained growth for our group.

Human Resource Development

To develop human resources who think for themselves and work with autonomy to tackle challenges in new fields, we implement various educational programs including rank-based trainings and practical workshops and sending employees to language schools. We also support employees to improve their skills by encouraging and subsidizing obtaining certifications (PhD, JGAP instructor, etc.) and distance learning directly and indirectly related to business.



New employee training

Work-Life Balance

As part of realizing a work-life balance, we believe it is important to create workplaces where employees feel it is easy to work.

In addition to child care and family care leave programs, we also aim to realize work-life balance through other leave programs offering half-day paid leave, hourly paid leave, and planned paid leave. Promoting changes to how employees work from multiple angles will lead to increased productivity by individual employees, reductions in long working hours, and a higher rate of employees taking annual paid leave.

Physical and Mental Health Management

We conduct annual health checkups and stress checks at all of our locations for the purpose of managing employees' physical and mental health. We also offer health consultations and in-person guidance with an industrial physician as necessary. We are working to expand our support system, such as by setting up a hotline where employees and their families can receive consultations on health and medical treatment and mental health counseling in cooperation with a contracted outside party.

Financial Data

Consolidated management indicators

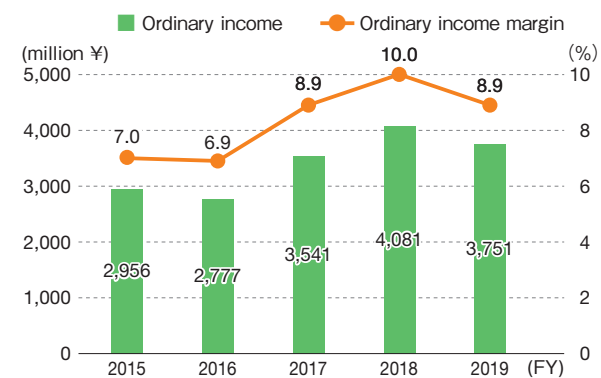
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Sales (million ¥)	42,251	40,117	39,826	41,015	41,986
Ordinary income (million ¥)	2,956	2,777	3,541	4,081	3,751
Current net income attributable to parent company shareholder (million ¥)	1,900	1,965	1,989	2,944	2,818
Comprehensive income (million ¥)	2,567	1,612	3,642	2,604	2,624
R&D expense (million ¥)	1,557	1,578	1,484	1,495	1,483
Depreciation cost (million ¥)	1,462	1,444	1,505	1,349	1,275
Capital investment (million ¥)	1,199	1,880	1,236	2,257	2,733
Net assets (million ¥)	17,528	18,877	21,926	24,179	26,356
Total assets (million ¥)	44,204	39,974	40,438	40,421	43,398
Net assets per share (¥)	636.01	685.04	809.61	892.77	973.17
Current net income per share (¥)	68.93	71.30	72.51	108.69	104.07
Diluted net income per share (¥)	—	—	—	—	—
Capital adequacy ratio (%)	39.7	47.2	54.2	59.8	60.7
Return on equity (ROE) (%)	11.6	10.8	9.8	12.8	11.2
Price-earnings ratio (ratio)	6.8	5.2	9.9	5.1	5.7
Cash flow from sales activity (million ¥)	1,189	3,628	5,161	3,360	3,923
Cash flow from investment activity (million ¥)	(816)	(1,694)	(1,294)	(2,142)	(2,235)
Cash flow from financial activity (million ¥)	(372)	(2,353)	(3,397)	(1,391)	(2,017)
Final balance of cash and cash equivalents (million ¥)	1,612	961	1,454	1,259	904
No. of employees [Average number of temporarily hired workers besides regular employees]	771 [161]	765 [157]	751 [147]	739 [147]	768 [147]

(Notes)

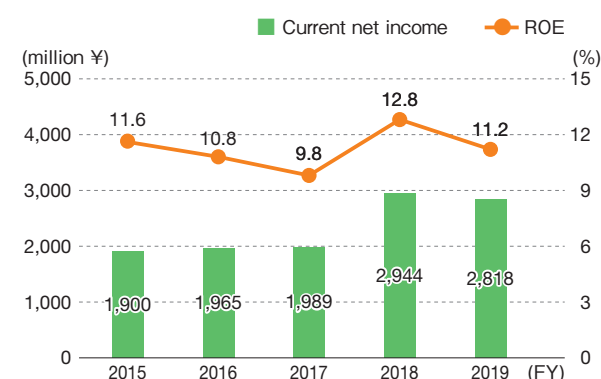
1. Sales do not include consumption tax.

2. Diluted net income per share is not listed since there are no dilutive shares.

Ordinary income/Ordinary income margin



Current net income attributable to parent company shareholder/ROE



Consolidated balance sheet

(Unit: million ¥)

	FY 2018 (November 30, 2018)	FY 2019 (November 30, 2019)		FY 2018 (November 30, 2018)	FY 2019 (November 30, 2019)
Assets			Liabilities		
Current assets			Current liabilities		
Cash and deposits	1,259	904	Bills and accounts payable	4,920	6,019
Bills and accounts receivable	10,529	11,243	Short-term debts payable	136	287
Products and finished goods	9,908	10,751	Long-term debts payable within one year	984	500
Products in progress	354	478	Accounts payable	1,936	2,855
Raw materials and stored goods	4,574	4,529	Income taxes payable	690	499
Other	336	463	Consumption taxes payable	247	9
Total of current assets	26,961	28,368	Accrued expenses	3,176	3,369
			Reserve for product returns	35	36
			Other	52	109
Fixed assets			Total of current liabilities	12,175	13,682
Tangible fixed assets			Fixed liabilities		
Buildings and structures (net)	3,908	4,841	Long-term debts	950	450
Machinery and vehicles (net)	2,065	3,278	Liabilities related to post-employment benefits	2,869	2,727
Land	976	970	Deferred tax liabilities	44	0
Construction work-in-progress	716	136	Other	205	183
Other (net)	563	415	Total of fixed liabilities	4,068	3,360
Total of tangible fixed assets	8,228	9,640	Total of liabilities	16,242	17,042
Intangible fixed assets	300	619	Net assets		
Investments and other assets			Shareholder's equity		
Investment securities	4,702	4,499	Capital	3,214	3,214
Long-term loans	11	13	Capital surplus	2,608	2,608
Deferred tax assets	6	56	Earned surplus	16,598	18,970
Other	223	226	Treasury stock	(1,310)	(1,310)
Allowance for doubtful accounts	(12)	(22)	Total of shareholder's equity	21,111	23,482
Total of investments and other assets	4,932	4,771	Accumulated other comprehensive income		
Total of fixed assets	13,460	15,030	Valuation difference on other available-for-sale securities	2,540	2,243
			Foreign currency translation adjustment	102	79
Total of assets	40,421	43,398	Accumulated adjustment related to post-employment benefits	426	551
			Total of accumulated other comprehensive income	3,068	2,873
			Total of net assets	24,179	26,356
			Total of liabilities and net assets	40,421	43,398

● Consolidated Income Statement

(Unit: million ¥)

	FY 2018 (From December 1, 2017 to November 30, 2018)	FY 2019 (From December 1, 2018 to November 30, 2019)
Net sales	41,015	41,986
Cost of goods sold	30,138	31,176
Gross profit margin	10,877	10,810
Reversal of provision for sales returns	129	102
Provision for sales returns	102	107
Gross profit - net	10,904	10,805
Selling expenses and general administrative expenses	7,763	7,904
Operating income	3,141	2,902
Non-operating income		
Interest received	197	2
Dividends received	330	492
Foreign exchange gain	19	—
Commission received	426	432
Other	102	129
Total of non-operating income	1,075	1,055
Non-operating expenses		
Interest paid	55	51
Compensation paid	23	—
Foreign exchange loss	—	99
Litigation-related expenses	37	35
Other	20	21
Total of non-operating expenses	134	206
Ordinary income	4,081	3,751
Extraordinary income		
Fixed asset disposal income	—	20
Gain on sale of securities investments	—	16
Insurance proceeds	12	22
Total of extraordinary income	12	58
Extraordinary loss		
Fixed asset disposal loss	123	81
Impairment loss	24	1
Losses from disasters	24	4
Other	—	6
Total of extraordinary loss	171	91
Current net income before taxes	3,922	3,719
Corporate tax, resident tax, and business tax	964	919
Adjustment for corporate tax, etc.	14	(19)
Total of corporate tax, etc.	978	900
Current net income	2,944	2,818
Current net income attributable to parent company shareholder	2,944	2,818

● Consolidated cash flow statement

(Unit: million ¥)

	FY 2018 (From December 1, 2017 to November 30, 2018)	FY 2019 (From December 1, 2018 to November 30, 2019)
Cash flow from sales activity		
Current net income before taxes	3,922	3,719
Depreciation cost	1,349	1,275
Goodwill depreciation	—	26
Change in liabilities related to post-employment benefits [() notes a decrease]	110	(17)
Change in reserve for product returns [() notes a decrease]	(27)	5
Received interest income and received dividends	(528)	(495)
Interest paid	55	51
Fixed asset disposal profit and loss [() notes a gain]	111	59
Impairment loss	24	1
Insurance proceeds	—	(20)
Casualty loss	24	4
Change in trade receivables [() notes an increase]	(591)	(279)
Change in inventory assets [() notes an increase]	672	(609)
Change in trade payable [() notes a decrease]	(1,183)	736
Change in accounts payable [() notes a decrease]	(293)	175
Change in accrued expenses [() notes a decrease]	(150)	189
Change in consumption tax payable [() notes a decrease]	134	(276)
Other	(70)	47
Subtotal	3,560	4,591
Interest and dividends received	528	495
Interest paid	(56)	(48)
Insurance received	—	20
Corporate tax, etc. paid	(694)	(1,135)
Corporate tax, etc. refunded	23	1
Cash flow from sales activity	3,360	3,923
Cash flow from investment activities		
Expenditures from obtaining securities investments	(117)	(0)
Revenue from the sale of securities investments	—	62
Expenditures from obtaining tangible fixed assets	(1,955)	(1,963)
Revenue from disposal of tangible fixed assets	21	37
Expenditures from obtaining intangible fixed assets	(33)	(38)
Expenditures for acquisition of subsidiary shares in conjunction with change in the scope of consolidation	—	(290)
Other	(58)	(43)
Cash flow from investment activities	(2,142)	(2,235)
Cash flow from financial activities		
Change in short-term debt [() notes a decrease]	—	159
Expenditures from repayment of long-term debt	(1,040)	(1,729)
Expenditures from obtaining treasury stock	(0)	(0)
Dividends paid	(351)	(447)
Cash flow from financial activities	(1,391)	(2,017)
Translation difference related to cash and cash equivalents	(22)	(26)
Change in cash and cash equivalents [() notes a decrease]	(195)	(355)
Opening balance of cash and cash equivalents	1,454	1,259
Final balance of cash and cash equivalents	1,259	904



This year is the International Year of Plant Health 2020 (IYPH2020).

More than 80% of the world's food is plant derived, and of that amount, 20% to 40% is lost to damage caused by agricultural pests and diseases.

To address major issues including hunger, poverty, threats to the environment, and economic development, it is crucial that we prevent the spread of harmful plants pests to new regions.

Let's consider plant health on the occasion of the International Year of Plant Health 2020.

Hokko Chemical Industry Co., Ltd. is an official supporter of the International Year of Plant Health 2020.



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