

FY2019

# Earnings Conference

November 28, 2019

NIHON NOHYAKU CO., LTD.



Note

The earnings forecasts and other forward-looking statements indicated in this document are based on currently available information as well as on what we deem to be certain reasonable assumptions but actual earnings may differ due to various factors.



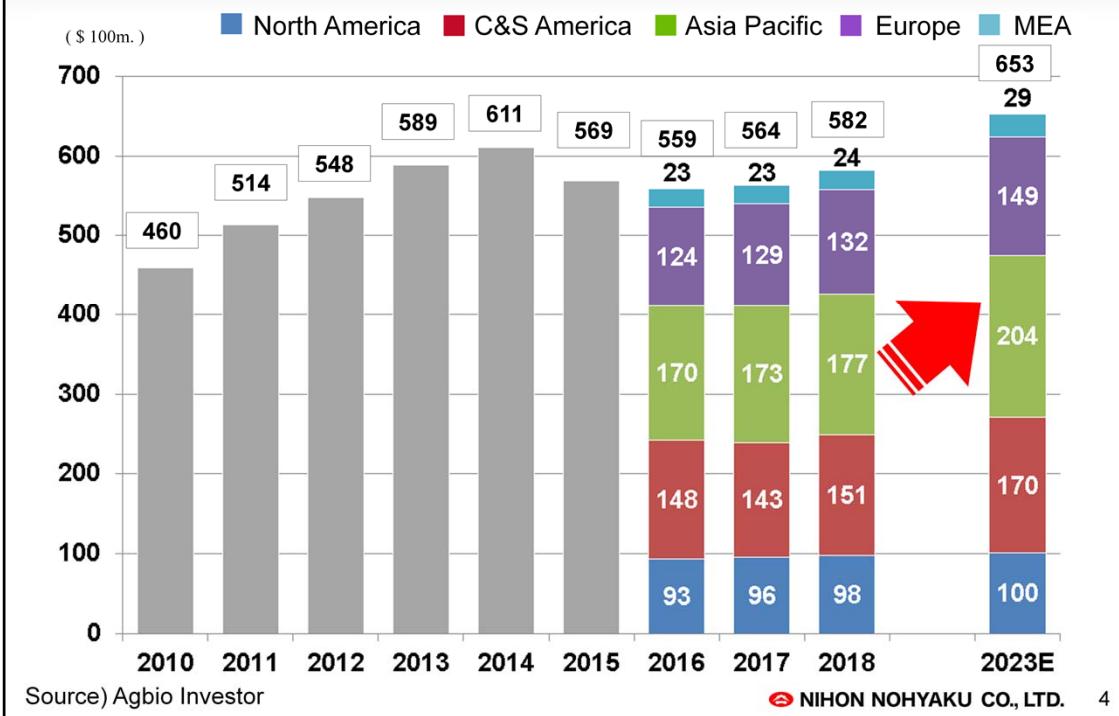
# FY2019 Earnings Conference

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## I. Global Agrochemical Markets

## Global Agrochemical Markets



The graphs in this section show the global agrochemical markets performance from 2010 to 2018 and forecasts for 2023.

The global agrochemical market grew from \$46 billion in 2010 to \$61.1 billion in 2014, reflecting population growth and economic development in emerging countries.

Over the past few years, sales have been weak due to the impact of small-scale pests in some regions and the impact of inventories in the past fiscal year due to unseasonable weather.

However, sales in major markets such as Brazil and North America have been on an uptrend again in 2018.

According to the study by Agbio Investor, the global agrochemical market is expected to grow at an average annual rate of 2.5% over the next five years to reach \$65.3 billion in 2023.

# Global Agrochemical Markets

## North America

2019 resulted in low demand for agrochemicals due to unseasonable weather in the midwestern United States and other factors.

## Latin America

Overall, demand improved thanks to the consumption of past inventory in Brazil, the world's largest market, but the future remains unclear due to intensifying competition.

## Europe

Demand for agrochemical grew in the hot and humid Mediterranean coast, where pests frequently occurred.

## Asia

India and certain regions in Southeast Asia were impacted by drought but overall market demand grew thanks to increased use of agrochemicals.

## Japan

Largely unchanged due to impact of reduction in distribution inventory.

In North America, demand for agrochemicals was low due to unseasonable weather in the midwestern United States and other factors.

On the other hand, in Latin America, overall demand improved thanks to the consumption of past inventory in Brazil, the world's largest market, but the future remains unclear due to intensifying competition.

Demand for agrochemicals grew in Europe. Particularly, in the hot and humid Mediterranean coast, where pests frequently occurred.

In Asia, India and certain regions in Southeast Asia were impacted by drought but overall market demand grew thanks to increased use of agrochemicals.

In comparison, Japan was largely unchanged due to impact of reduction in distribution inventory.

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## **II. FY2019 Earnings**

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# FY2019 Earnings

## Increase in Revenues

(¥ 100m. yen / %)

	Fiscal 2019	Fiscal 2018	YoY	Growth %
Net Sales	632	612	20	3.3
Domestic Agrochemical Sales	198	201	△ 3	△ 1.6
Overseas Agrochemical Sales	355	338	17	5.0
Other agrochemicals	21	16	5	32.2
Chemical Products excluding agrochemicals	39	39	0	0.0
Others	19	17	2	8.7
Cost of Sales	422	393	29	7.5
Gross Profit	209	219	△ 9	△ 4.2
SG&A	176	177	△ 0	△ 0.4
Operating Income	33	41	△ 8	△ 20.5
Ordinary Income	29	36	△ 6	△ 18.3
Profit Attributable to Owners of Parent	26	25	1	7.1

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At past earnings conferences, we have explained earnings by modifying segment categories from earnings reports. To enable better understanding, as of this earnings conference we have changed categories to match the earnings report and categorized earnings information as agrochemical business and chemical products business other than agrochemical.

Previous fiscal year net sales were ¥63.2 billion, and increase of ¥2.0 billion, or 3.3%, year on year.

Operating income was ¥3.3 billion, a decrease of ¥0.8 billion, or 20.5%, year on year. Ordinary income was ¥2.9 billion, a decrease of ¥0.6 billion, or 18.3%, year on year. Profit attributable to owners of parent was ¥2.6 billion, an increase of ¥0.1 billion, or 7.1%, year on year, due in part to the recording of a gain on the sale of shares of parent company as extraordinary income.



## FY2019 Earnings (YoY Comparison )

Net sales ¥61.2 bn → ¥63.2 bn (+2.0 bn)

Increase in sales of overseas agrochemical +1.7 bn

Operating income: ¥4.1 bn → ¥3.3 bn (-¥0.8 bn)

Increase in know-how technical fees +0.5 bn

Impact of current fluctuations, cost increases, etc. -1.3 bn

FY2019 net sales increased ¥2.0 billion. Overseas sales for agrochemicals, our core business, increased by ¥1.7 billion.

On the other hand, operating income decreased by ¥0.8 billion. Despite increased income factors such as ¥0.5 billion increase in know-how technical fees, there were decreased income factors such as the impact of current fluctuations and cost increases.

## Agrochemical (Domestic)

### - Composition of Net Sales

The domestic agrochemical sales were largely unchanged



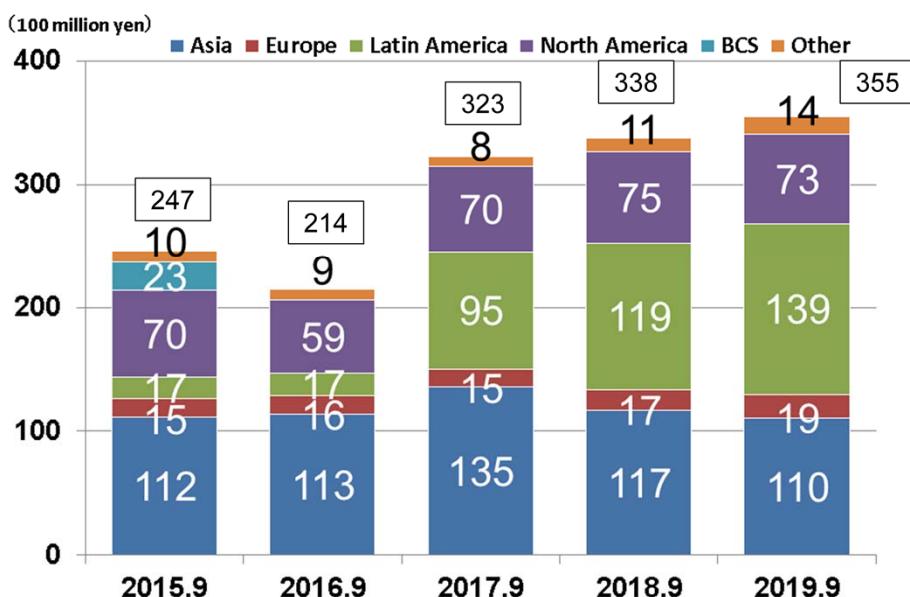
This graph shows the transitions in net sales for domestic agrochemical sales.

During the previous fiscal year, we began selling three new products and expanded our product portfolio. We worked to expand sales of our proprietary products, including the fungicide “PARADE” (pyraziflumid). Although there was the impact of distribution inventory, like the overall domestic agrochemical market, total domestic sales were largely unchanged.

# Agrochemical (Overseas)

## - Net Sales by Region

### Growth in Latin America



Actual foreign currency rates  
108.01 yen/dollar (FY2018=108.88 yen)  
119.26 yen/euro (FY2018=131.38 yen)

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This graph shows the transitions in net sales by region for overseas agrochemical sales.

During the previous fiscal year, in Asia overall market demand increased and our sales in South Korea and China, which are the main agrochemical marketing countries in Asia, were sluggish due to the impact of distribution inventories and other factors.

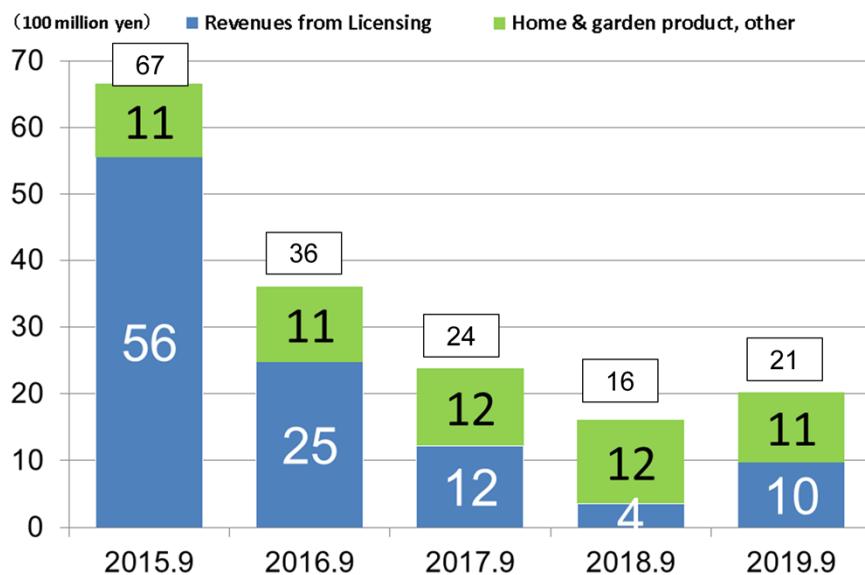
Furthermore, in India, where monsoon season was delayed, agrochemical demand was low due to delays in planting and other factors. On the other hand, sales in Latin America grew thanks to the recovery of the Brazilian market.

As a result, overseas agrochemical sales increased by ¥ 1.7 billion year on year.

Furthermore, actual foreign currency rates for the previous fiscal year are as indicated here.

## Agrochemical (Others)

### Increase in Know-how Technical Fees



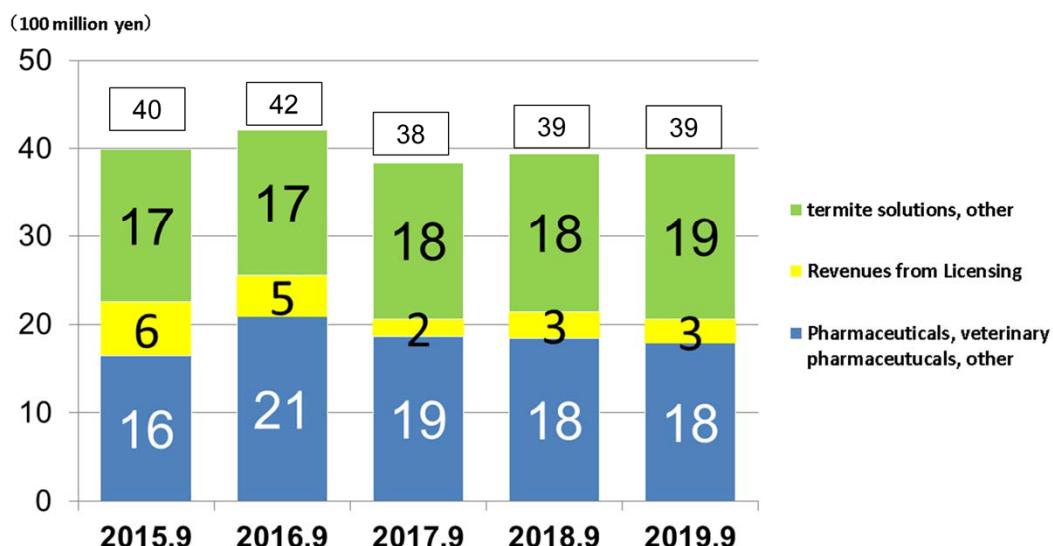
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This graph shows transitions in domestic and overseas agrochemical business sales for non-agrochemical products categorized by know-how technical fees (blue) and horticultural products (green). During the previous fiscal year, know-how technical fees increased thanks to favorable sales at customers adopting our technology.

# Chemical Products

(Non-agrochemical products)

Revenues from termite pesticide segment grew



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The graph shown here shows transitions chemical products business sales for non-agrochemical products segmented into pharmaceuticals and animal health care products business (blue), pharmaceutical know-how technical fees (yellow), and termite and sanitary insect pest control agents (green). Last fiscal year, sales of termite pesticides grew.



## Major Earnings of Domestic Group Companies

(¥ m. / %)

		Fiscal 2019	Fiscal 2018	YoY	Growth %
Nichino Service	Net sales	4,316	4,378	△ 62	△ 1.4
	Operating income	170	158	12	7.8
	Net profit	130	126	4	3.3
Nichino Ryokka	Net sales	1,955	1,694	261	15.4
	Operating income	60	25	34	137.6
	Net profit	37	15	22	149.6
Nihon Ecotech	Net sales	792	757	34	4.6
	Operating income	52	3	49	1401.9
	Net profit	40	8	32	432.2
AgriMart	Net sales	1,914	1,536	378	24.6
	Operating income	214	147	66	45.1
	Net profit	142	92	50	54.6

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This table shows major earnings of NNC's domestic consolidated subsidiaries during the previous fiscal year.

Nichino Ryokka, improved profitability and increased earnings by focusing on sales of chemicals for golf courses and practicing selective acceptance of landscaping construction. Also, termite pesticide seller AgriMart, recorded increased sales and profits for five consecutive years.



## Major Earnings of Overseas Group Companies

( ¥ m. / % )

		Fiscal 2019	Fiscal 2018	YoY	Growth % based on local currency
Nichino America	Net sales	7,270	7,479	△ 209	2.3
	Operating income	615	823	△ 208	△ 21.3
	Net profit	441	598	△ 158	△ 22.4
Taiwan Nihon Nohyaku	Net sales	432	468	△ 37	△ 1.6
	Operating income	62	63	△ 1	5.1
	Net profit	50	53	△ 4	0.4
Nichino India	Net sales	5,955	6,405	△ 450	△ 4.6
	Operating income	104	182	△ 78	△ 41.3
	Net profit	124	38	86	231.9
Sipcam Nichino Brasil	Net sales	12,870	10,094	2,775	29.9
	Operating income	850	963	△ 114	△ 10.1
	Net profit	187	235	△ 49	△ 18.9
Nichino Europe	Net sales	1,847	—	—	—
	Operating income	47	—	—	—
	Net profit	51	—	—	—

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This table shows major earnings of NNC's overseas consolidated subsidiaries during the previous fiscal year.

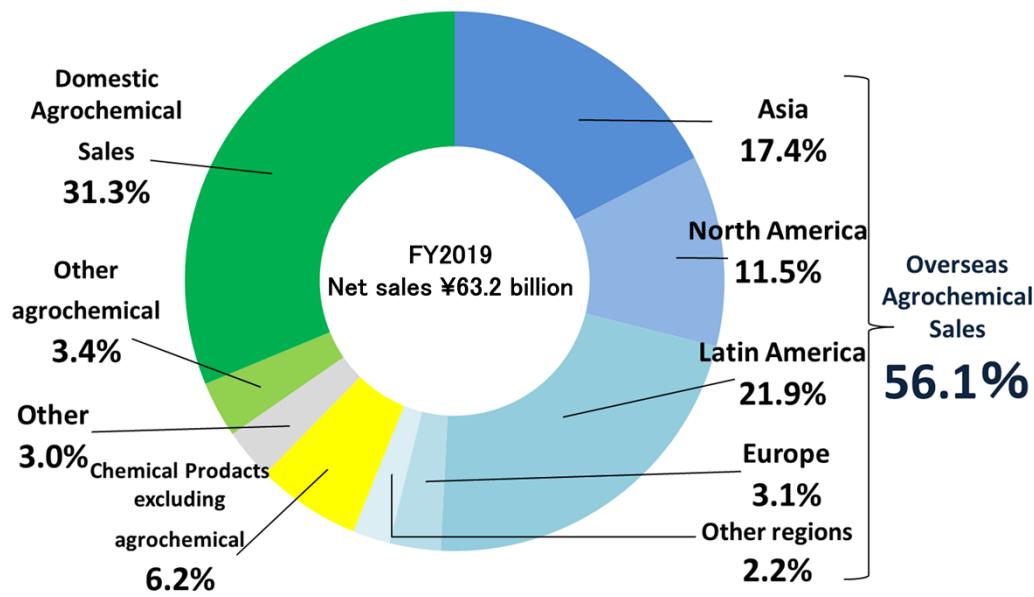
Nichino America (NAI), recorded decreased revenues when converted to yen due to the impact of currency fluctuations but revenues increased by 2.3% based on local currency.

Sipcam Nichino Brasil (SNB), struggled to achieve profit growth due to an increasing cost of sales ratio caused by appreciation of the yen against the Brazilian real and worsening financial balance. However, based on local currency, net sales increased significantly year on year by approximately 30%.

Furthermore, Nichino Europe(NEU) has been consolidated and included In the business results since the previous fiscal year.

# Composition of Net Sales by Business Segment

| Ratio of overseas sales grew, steady progress for Growing Global



This graph shows the composition of net sales by business segment.

During FY2019, our ratio of overseas sales increased thanks to favorable sales of agrochemicals in Latin America, representing solid progress towards our Group Vision Growing Global.

### III. Plan for FY2020.3

(Note)

Pursuant to the approval of the “Partial Revisions to the Articles of Incorporation” at the 120th Regular General Meeting of Shareholders scheduled for December 20, 2019, we plan to change our fiscal year-end from September 30 to March 31. As a result, FY2020(2019.10.1~2020.3.31), the fiscal year ending March 2020 will be a six-month period. As such, year-on-year changes reflect a comparison with the cumulative second quarter (six months) of FY2019.

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## Plan of FY2020 (YoY comparison)

	2020.3Plan	2Q/FY2019	YoY	Growth %	( ¥ 100m. / % )
Net Sales	<b>370</b>	<b>371</b>	△ 1	△ 0.5	
Domestic Agrochemical Sales	<b>127</b>	<b>139</b>	△ 12	△ 8.5	
Overseas Agrochemical Sales	<b>199</b>	<b>192</b>	7	3.7	
Other agrochemicals	<b>24</b>	<b>22</b>	2	10.6	
Chemical Products excluding agrochemicals	<b>10</b>	<b>10</b>	0	2.3	
Other	<b>10</b>	<b>9</b>	1	7.4	
Cost of Sales	<b>245</b>	<b>246</b>	△ 2	△ 0.7	
Gross Profit	<b>125</b>	<b>125</b>	△ 0	△ 0.2	
SG&A	<b>93</b>	<b>84</b>	9	10.4	
Operating Income	<b>32</b>	<b>40</b>	△ 8	△ 21.8	
Ordinary Income	<b>32</b>	<b>40</b>	△ 8	△ 21.6	
Profit Attributable to Owners of Parent	<b>24</b>	<b>29</b>	△ 5	△ 19.5	

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We plan for net sales of ¥37.0 billion, down ¥0.1 billion, or 0.5%, year on year mainly due to a decrease in revenues from domestic sales of agrochemicals, our core businesses. Looking at income, we are planning on operating income being ¥3.2 billion, down ¥0.8 billion, or 21.8%, year on year, ordinary income of ¥3.2 billion, down ¥0.8 billion, or 21.6%, year on year, and profit attributable to owners of parent of ¥2.4 billion, down ¥0.5 billion, or 19.5%, year on year.

## Plan of FY2020 (YoY comparison)

Net sales: ¥37.1 bn → ¥37.0 bn (-0.1 bn)

Operating income: ¥4.0 bn → ¥3.2 bn (-0.8 bn)

(operating income)

Contribution from NEU consolidation +0.3 bn

Temporary decrease in domestic agrochemical sales  
due to improvements to business customs -0.6 bn

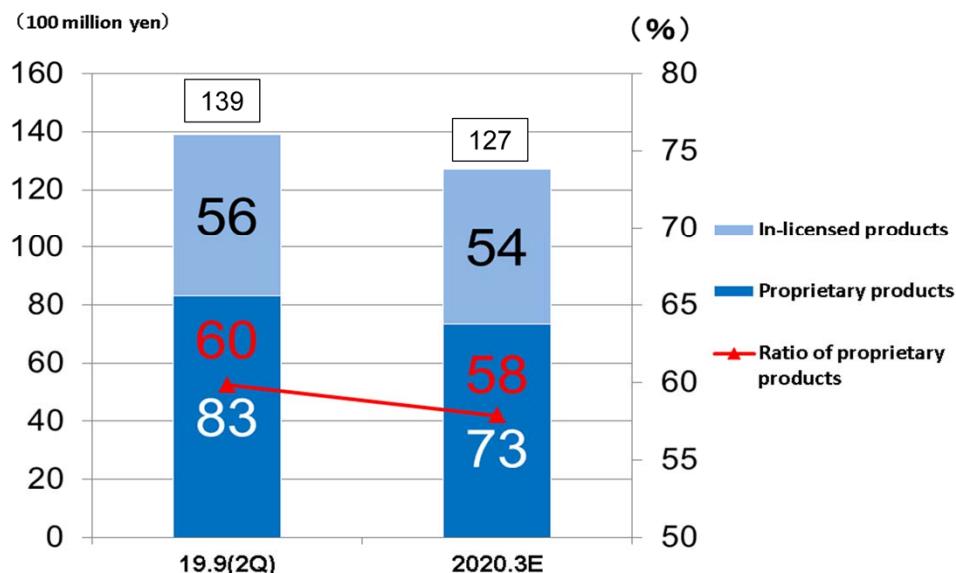
Increase in R&D expenses in the Americas, changes  
in product composition -¥0.5 bn

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This fiscal year we are planning on operating income of ¥3.2 billion, which represents a year-on-year decrease of ¥0.8 billion. Looking at major factors, increased income factors include ¥0.3 billion in contributions from the consolidation of Nichino Europe. On the other hand, decreased income factors include ¥0.6 billion due to a temporary decrease in domestic agrochemical sales resulting from improvements to business customs and ¥0.5 billion from increases in R&D expenses in the Americas and changes in product composition. The difference results in decreased income of ¥0.8 billion.

## Agrochemical (Domestic) - Composition of Net Sales

Temporary decrease in sales due to improvements to business customs



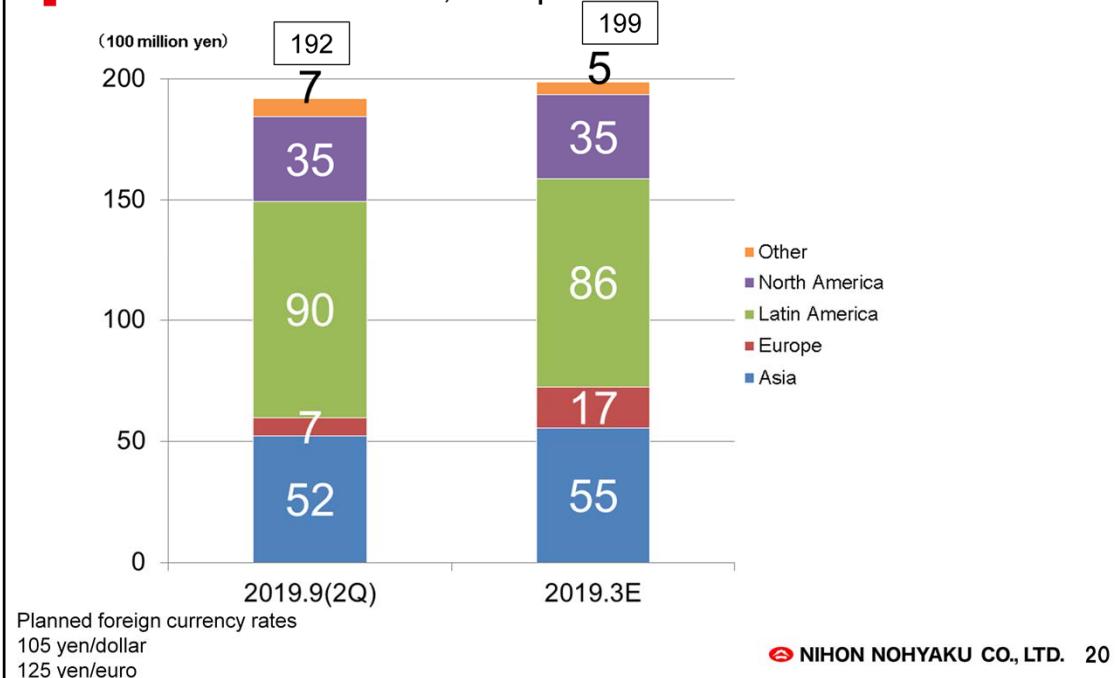
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This graph shows net sales for domestic agrochemical sales.

This fiscal year, we will work on creating a program for establishing technical sales, and market permeation for the fungicide "PARADE" (pyraziflumid) by expanding product applications. Looking at domestic sales, thus far sales have been focused on the period between January and March each year but to improve a sales style that is better aligned with actual demand and balance out the timing at which we record sales, we are planning on a temporary decrease in net sales this fiscal year.

## Agrochemical (Overseas) - Net Sales by Region

Sales increased in Asia, Europe



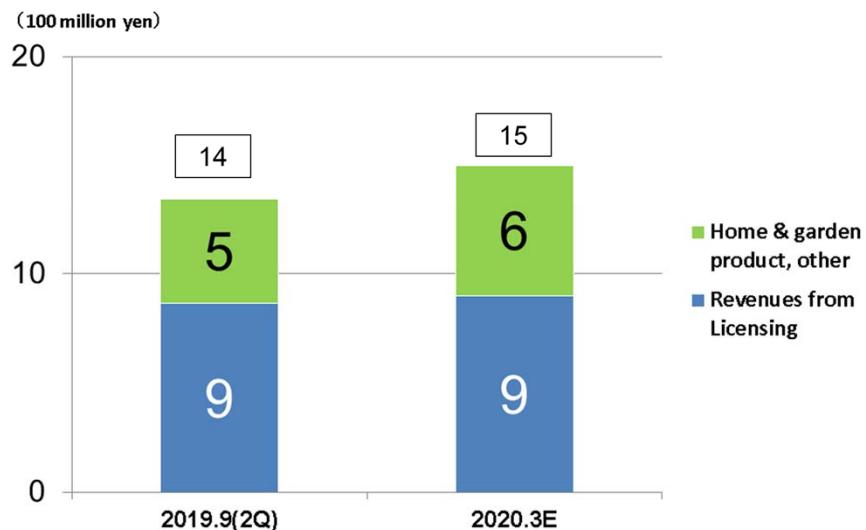
This graph shows net sales by region for overseas agrochemical sales.

This fiscal year, in Asia we will work to promote and expand sales of our core products such as "PHOENIX" (flubendiamide). We also will strengthen our sales platform for the domestic market in India for Nichino India (NIL) and strengthen its TG manufacturing functions. As such, we are forecasting net sales growth in the Asia region.

Furthermore, currency plans for the this fiscal year are shown here.

## Agrochemical (Others)

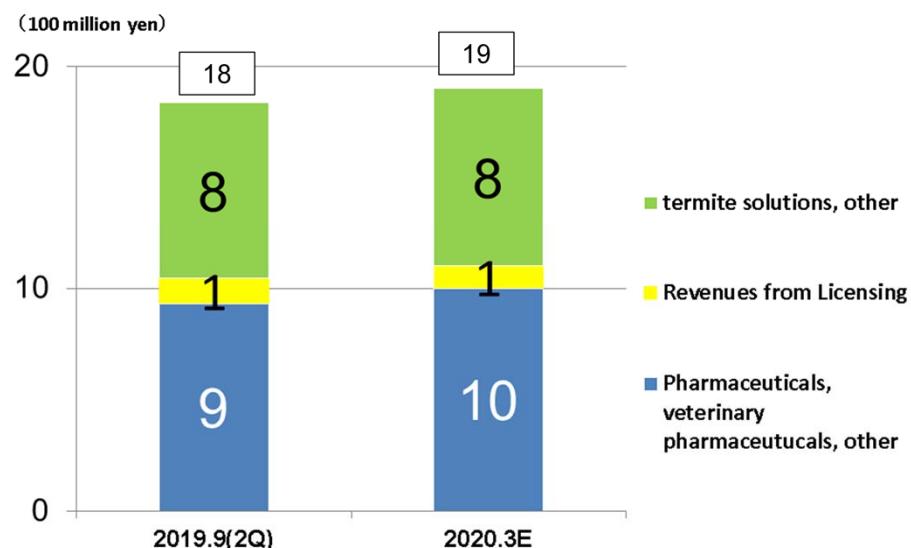
Increased sales for horticultural pesticides, etc.



This graph shows domestic and overseas net sales this fiscal year for the agrochemical business for non-agrochemical sales. This fiscal year, we are forecasting growth for the horticultural pesticides business (green).

## Chemical Products (Non-agrochemical products)

Pharmaceutical business sales grew



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This graph shows plans for the chemical products business for non-agrochemical sales. This fiscal year, we are forecasting increased sales for the pharmaceutical business (blue).



## Main Plans of Domestic Group Companies

( ¥ m. / % )

		2020.3 Plan	2Q/FY2019	YoY	Growth %
Nichino Service	Net sales	2,359	1,954	404	20.7
	Operating income	123	108	15	13.1
	Net profit	85	72	13	17.7
Nichino Ryokka	Net sales	989	864	124	14.4
	Operating income	0	29	△ 29	—
	Net profit	0	16	△ 16	—
Nihon EcoTech	Net sales	401	398	2	0.6
	Operating income	25	27	△ 3	△ 9.3
	Net profit	17	23	△ 7	△ 29.0
AgriMart	Net sales	797	743	53	7.3
	Operating income	111	103	8	7.3
	Net profit	67	67	0	△ 0.4

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This table shows the main earnings plans of domestic consolidated subsidiaries for the current fiscal year.



## Main Plans of Overseas Group Companies

( ¥ m. / % )

		2020.3 Plan	2Q/FY2019	YoY	Growth % based on local currency
Nichino America	Net sales	3,561	3,512	49	7.2
	Operating income	132	335	△ 203	△ 58.4
	Net profit	97	249	△ 152	△ 58.9
Taiwan Nihon Nohyaku	Net sales	171	171	△ 1	3.7
	Operating income	9	24	△ 16	△ 62.3
	Net profit	8	21	△ 14	△ 61.6
Nichino India	Net sales	2,986	2,767	218	15.8
	Operating income	△ 64	△ 37	△ 28	—
	Net profit	△ 67	34	△ 102	—
Sipcam Nichino Brasil	Net sales	8,295	8,350	△ 56	1.6
	Operating income	1,106	1,003	102	12.8
	Net profit	545	453	91	22.9
Nichino Europe	Net sales	1,740	—	—	—
	Operating income	326	—	—	—
	Net profit	230	—	—	—

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This table shows the main earnings plans of overseas consolidated subsidiaries for the current fiscal year.

## Dividend plans

Continuing to issue stable dividends

			16.9	17.9	18.9	19.9	20.3E
Net Income	Million Yen	1,035	1,717	2,507	2,684	2,200	
Total Dividend Amount	Million Yen	1,002	1,002	1,092	1,181	590	
Per Share Dividend	Interim	Yen	7.5	7.5	7.5	7.5	—
	Year-End	Yen	7.5	7.5	7.5	7.5	7.5
	Total	Yen	15.0	15.0	15.0	15.0	7.5
Dividend Payout Ratio	%	96.8	58.4	43.6	44.0	26.9	

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The dividend amount reflects the six-month period of the current fiscal year but we are planning on 7.5 yen, which is in line with our policy of continuing to issue stable dividends. We will continue to issue appropriate income returns based on a comprehensive evaluation of the economic environment, earnings and business plans, and our financial status.

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## **IV. Progress in Implementation of Growth Strategy**

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## Nichino Group Vision

**Nichino Group –**

# **Growing Global**

**to become an outstanding globally competitive group**

**We contribute to the future of mankind through protecting crops and improving our living environment by further improvement of our technology that has arisen through agrochemical business.**

**We contribute to society through supporting agriculture by providing new agrochemicals & technology continuously**

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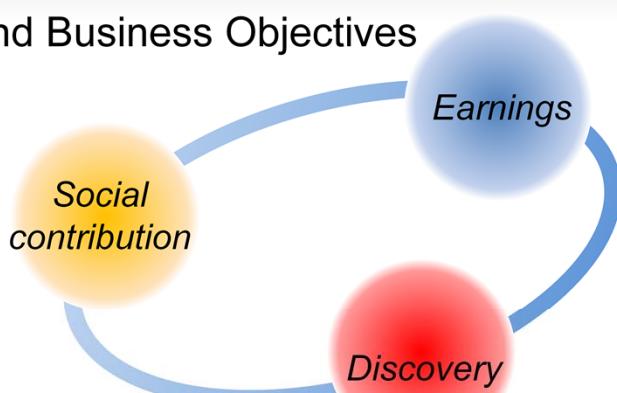
In 2012, we formulated the NNC Group Vision which envisions our ideal form, based on the recognition that we needed to expand our business scale and strengthen our financial base to support it in order to survive the intense competition and achieve sustained high growth.

Our Group Vision motto is: Nichino Group – Growing Global: To Become an Outstanding Globally Competitive Company.

The basic policy of our vision is “We contribute to the future of mankind through protecting crops and improving our living environment by further improvement of our technology that has arisen through agrochemical business.” Our main goal is “We contribute to society through supporting agriculture by providing new agrochemicals & technology continuously.”

## Ideal Business Scope

### Mission and Business Objectives



To contribute to society  
through continuous discovery of new agents

It is necessary to become a R&D-oriented company with sales of ¥200 bn size (next to “Big 4 Companies”) that ensures stable business propulsion and presence.

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Our goal is to become an R&D-oriented company ranking next to the “Big 4” multinational companies, with net sales of ¥200 billion.

This is because we believe that a certain scale of operation is necessary to ensure a stable business promotion and presence in order to contribute to society through continuous drug discovery.

# Progress in Implementation of Growth Strategy

## Initiatives to Achieve Group Vision

### Investments and partnerships

- ✓ **AgriMart Acquisition (Jan. 2014)**
- ✓ **Invested in SNB (Sep. 2014)**
- ✓ **Invested in NIL (Mar. 2015)**
- ✓ **Additional investment in Sipcam Europe S.p.A. (10% ⇒ 20%) (Sep. 2015)**

### Strengthening of overseas offices

- ✓ **Establish of Nichino Vietnam (NVC) (Mar. 2017)**
- ✓ **Acquisition of Nihon Nohyaku Andica (NAS) (Feb. 2018)**
- ✓ **Nichino Europe Co., Ltd. consolidation (Sep. 2019)**

During the period of our two Medium –Term Business Plans from FY Sep. 2013 to FY Sep 2018, we advanced strategies focused on business scope expansion, including product acquisition, investments, and partnerships. More specifically, we executed capital partnerships or acquisitions for AgriMart Corporation, Nichino India (NIL), Sipcam Nichino Brasil (SNB), and established local subsidiaries in Vietnam and Colombia. These efforts resulted in a certain level of success in expanding our business. During the previous fiscal year, we added Nichino Europe(NEU) to the scope of consolidation.

# Progress in Implementation of Growth Strategy

## Initiatives to Achieve Group Vision

### Pursuit of group synergy

- ✓ **Nichino India Pvt. Ltd.(NIL)**
  - Started technical grade (TG) synthesis of “FUJI-ONE” (isoprothiolane) and “APPLAUD” (buprofezin)
  - Started sales of “APPLAUD” (buprofezin) TG to Indian domestic sales company
  - Started sales of “FUJI-ONE” (isoprothiolane) in India
- ✓ **Sipcam Nichino Brasil S.A.(SNB)**
  - Started sales of “APPLAUD” (buprofezin), “DANITRON” (fenpyroximate), and orthosulfamuron

### Improve capability of creating new AIs

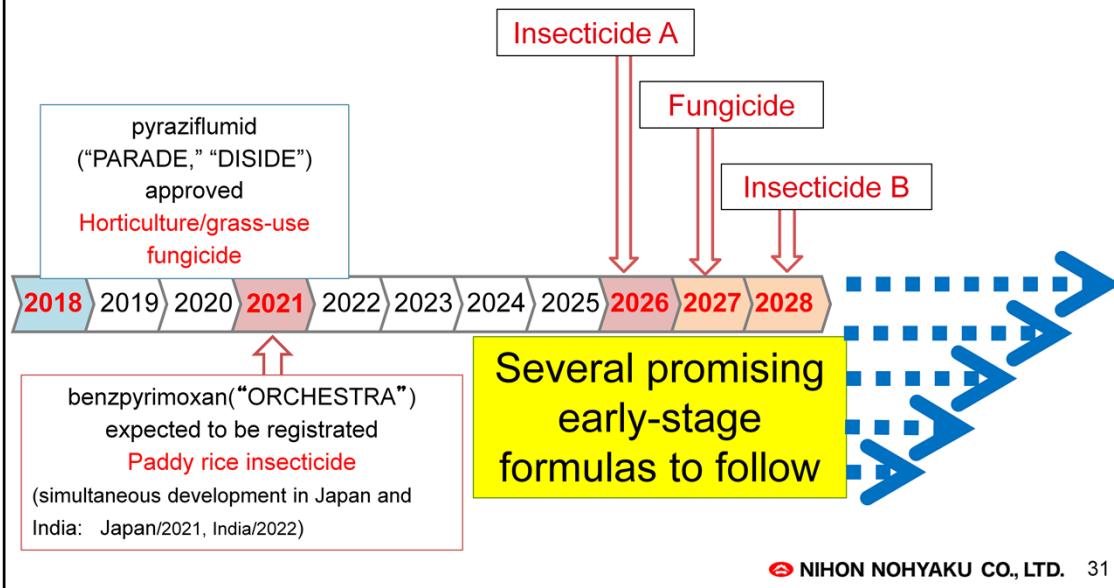
- ✓ Miticide “DANIKONG” (pyflubumide)  
(launched in Japan in Mar. 2015, launched in South Korea in Mar. 2017)
- ✓ Horticultural fungicide agent “PARADE” (pyraziflumid)  
(Launched in Japan in Apr. 2018)

Through efforts to increase investment synergies, we also promoted establishment of proprietary product production and direct-sales structures at overseas subsidiaries. Specifically, at Nichino India (NIL) we synthesize the TG of “FUJI-ONE” (isoprothiolane) and “APPLAUD” (buprofezin), and began sales of the “APPLAUD” (buprofezin) TG, and from last year, we began sales of “FUJI-ONE” (isoprothiolane) to Indian domestic sales company. At Sipcam Nichino Brasil (SNB), we launched full-scale sales of proprietary products such as “APPLAUD” (buprofezin), “DANITRON” (fenpyroximate), and orthosulfamuron.

As part of new product development, we launched the miticide “DANIKONG” (pyflubumide) in Mar. 2015 in Japan and South Korea in Mar. 2017. We also launched sales of the wide spectrum fungicide “PARADE” in Apr. 2018 in Japan. “PARADE” is expected to offer superior performance in a wide range of applications, including horticulture, paddy rice, and turfgrass.

# Progress in Implementation of Growth Strategy

- 1) Launch new agents amid increasing difficulty in creation of new active ingredients
- 2) Invest over 10% of annual net sales in R&D



In recent years, discovering new bioactive compounds (creation of new AIs) has become more challenging. At the same time, safety assessment standards have risen and the cost of maintaining existing registrations has increased, resulting in a dramatic increase in research and development expenses.

Amid such conditions, we are investing over 10% of annual net sales into research and development (R&D) in order to further enhance our R&D capabilities. Details on new agent development and respective launch schedules are as shown.

We are developing the new paddy rice insecticide "ORCHESTRA" (benzpyrimoxan), in Japan and India with the goal of launching to market in 2021 and 2022, respectively.

In addition, as a result of our efforts to quickly expand our pipeline with the goal of launching one agent every three years, we are currently developing three new products, two insecticides and fungicide, with the goal of launching sales at the site.

Additionally, we will have multiple promising early-stage formulas following the pipeline. We are working diligently on R&D to accelerate development.

# Progress in Implementation of Growth Strategy

## Progress in FY2019

### Newly developed products

Completion of agrochemical registration of new pesticide “ORCHESTRA” (benzpyrimoxan)

- ✓ Effective against hoppers and leafhoppers
- ✓ In Feb. 2019, agrochemical registration in Japan and India was completed.
- ✓ Peak sales: Japan: ¥1 billion, India: ¥6 billion
- ✓ Working to advance sales in India ahead of schedule (Initial plan 2023 ⇒ 2022)
- ✓ Mixtures with various pesticides and fungicide are under development
- ✓ Registration is under consideration in Southeast Asian countries, etc.

In February this year, we completed the agrochemical registration for the previously mentioned paddy rice insecticide “ORCHESTRA” in Japan and India.

We expect peak sales in Japan of ¥1 billion and in India of ¥6 billion. Sales in India were scheduled to begin in 2023 but we are working diligently to contribute to earnings at an early stage by moving forward this plan to 2022.

We are also developing a mixture product of “ORCHESTRA” with various insecticides and fungicides. In addition to Japan and India, we are also considering acquiring registrations in Southeast Asian countries and other countries, and we will cultivate this product as one of our key global products in the field of paddy rice.

# Progress in Implementation of Growth Strategy

## Progress in FY2019

### Promoting development of existing products

#### Wide spectrum fungicide “PARADE” (pyraziflumid)

- ✓ Advancing development of cell seedling irrigation treatment that will enable new spraying methods  
⇒Approved in Aug. 2019 for lettuce
- ✓ Formulation approved in Korea in Mar. 2019, preparing for sales launch
- ✓ Conducting development, aiming for approval in the United States in 2019
- ✓ Evaluating possibility for development in Europe and Brazil

For the wide spectrum fungicide “PARADE”(pyraziflumid), we are advancing the development of a cell seedling irrigation treatment that will enable new spraying methods and received approval for lettuce in August this year.

Overseas, we received formulation approval in Korea in March this year and are preparing to launch sales. In the United States, we are driving development in preparation to file for approval this year and we are evaluating possibilities for development in Europe and Brazil.

# Progress in Implementation of Growth Strategy

## Progress in FY2019

### Advancing development of existing products

Horticulture insecticide "PHOENIX" (flubendiamide)

- ✓ Registered the technical grade in Brazil in Oct. 2019 and planning to launch sales in 2020.  
⇒ Peak sales of ¥1.4 billion

Horticulture insecticide "COLT" (pyrifluquinazon)

- ✓ Acquired U.S. Food Registration in Nov. 2018, launched sales via Nichino America Inc. (NAI)
- ✓ Peak sales in the United States of ¥0.5 billion to ¥1 billion

### New business projects

Evaluating products for frost damage control

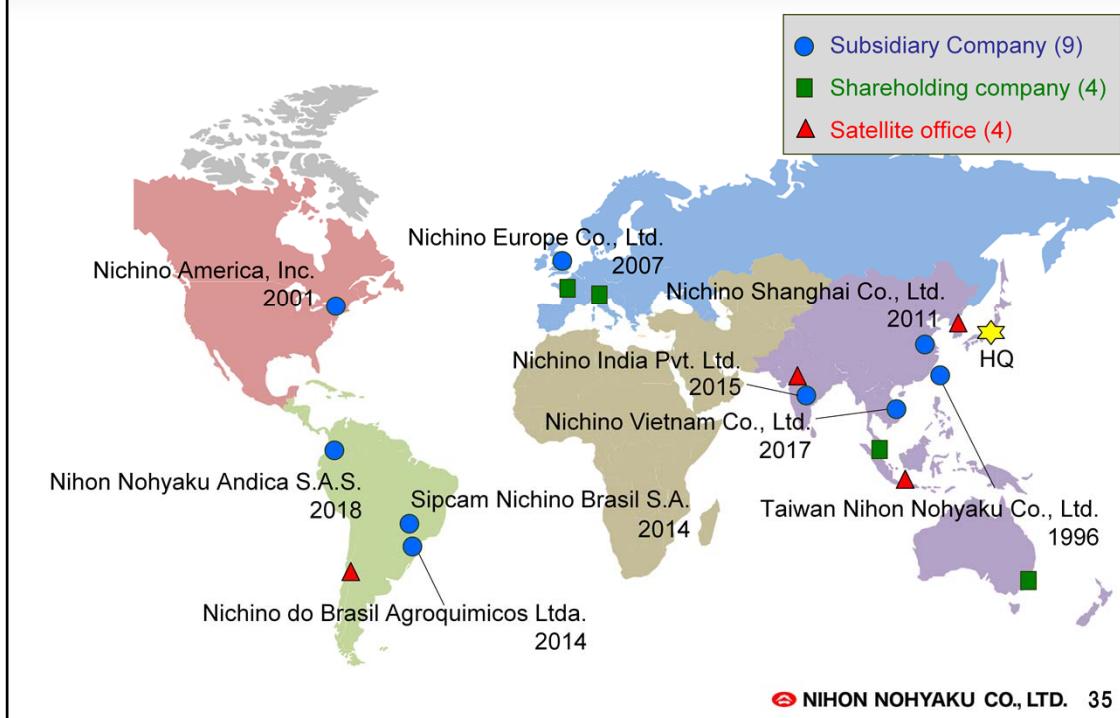
- ✓ Developing for turfgrass, apples, and tea  
(Collaboration with Kansai University, KUREi, Goshogawara Agriculture and Forestry High School, and Nichino Ryokka)

In October, we registered the technical grade for the horticulture insecticide "PHOENIX" (flubendiamide) in Brazil and are aiming to launch sales in 2020. We are driving development with the aim of ¥1.4 billion in net sales during peak season.

In November last year, we acquired a U.S. food registration for "COLT" (pyrifluquinazon), a horticulture insecticide, and began selling it in this field from Nichino America (NAI). We expect peak sales in the United States of ¥0.5 billion to ¥1 billion.

Additionally, as a new business project, we are evaluating development of a product for frost damage control for turfgrass, apples, and tea.

# Progress of Overseas Base Strategy



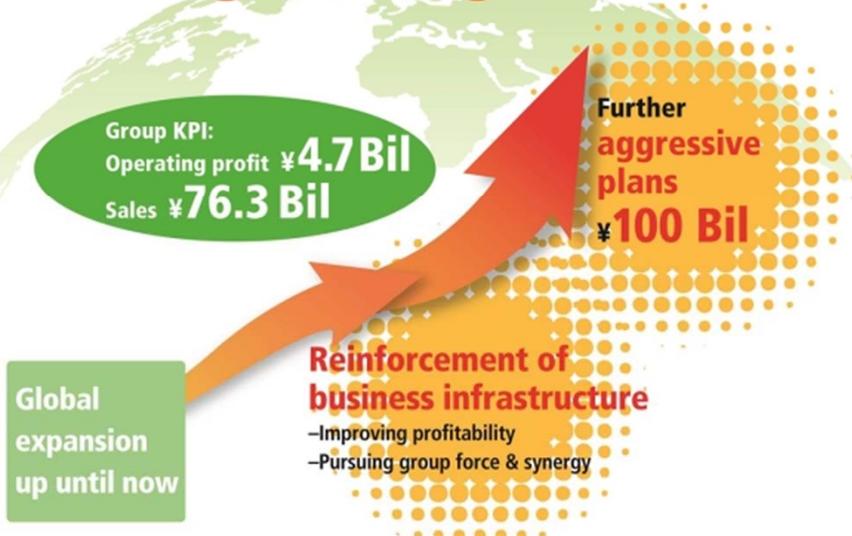
This map shows our overseas locations.

We have development and marketing bases, sales and production bases all around the world, including three major overseas group companies, Nichino America (NAI), Nichino India (NIL), and Sipcam Nichino Brasil (SNB). Also there are sales subsidiaries in Europe and Taiwan, four non-consolidated subsidiaries and four invested companies.

Our globalization is progressing steadily.

## Medium-Term Business Plan

### Ensuring Growing Global 2021



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Based on the results of initiatives aimed at achieving this vision and the results of our previous Medium-Term Business Plan, we are advancing a new three-year Medium-Term Business Plan to begin in the previous fiscal year.

The theme of this plan is "Ensuring Growing Global 2021" and we are positioning this Medium-Term Business Plan period as a period for strengthening our business infrastructure.

During the period of this Medium-Term Business Plan, we will focus on the two core pillars of "Improving profitability" and "Pursuing group force & synergy".

We will accelerate the income contributions of growth strategies implemented thus far and strengthen business infrastructure to ensure our ability for growing global. We also will continue with M&A, partnerships, and product acquisition as part of initiatives to expand business scope.

In FY2021, the final year of the plan, we aim to achieve operating income of ¥4.7 billion from existing businesses, net sales of ¥76.3 billion, and net sales of ¥100 billion through the realization of new growth strategies.

## Aiming to Achieve ¥100 Billion in Net Sales

### Toward the Achievement of the "Nichino Group-Growing Global"



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The graph shows the results and plans for net sales and operating income for fiscal years 2010 through 2021.

Nichino Group sees FY2021 net sales of ¥100 billion as a milestone and aims to become an R&D oriented company with net sales of ¥200 billion, meaning lining next to the four major multinational companies.

## Progress of Capital Partnership with ADEKA Corp.

### Established the Partnership Promotion Committee and engaging in activities

- ✓ Both companies kicked off the partnership promotion committee in Dec. 2018.
- ✓ To create future synergy, we are evaluating collaborative themes with a focus on the life sciences business.
- ✓ We are sharing technology and knowhow towards strengthening R&D capabilities at both companies.
- ✓ We began detailed evaluations towards collaborating on production center use, procurement, and logistics.



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Last September, ADEKA acquired 51% of our stock through a TOB and a third-party capitalization, making us a consolidated subsidiary of ADEKA.

The main purpose of this capital partnership is to maximize the corporate value of both companies by cooperating with ADEKA towards implementing and promoting strategic plans and activities related to our life sciences business including agrochemical and pharmaceutical businesses.

To achieve this goal, the two companies established a partnership promotion committee in 2018 December. This committee is evaluating collaborative themes for both companies with a focus on the life sciences business to create future synergy. We also are sharing technology and know-how to strengthen our R&D capabilities and we began detailed evaluations towards collaborating on production center use, procurement, and logistics.

## V. Smart Agriculture Initiatives

## Rapid Population Decline and the Advent of a Super-aging Society

- Accelerating decline in the labor force.
- In all industries, there is a need to switch to super-labor-saving and high-quality production by using robotics technology, remote sensing technology using artificial satellites, and ICT, including cloud systems.
- Even in agriculture, labor shortages due to aging and a decline in new farmers are prominent.  
⇒ Labor saving and technical support for new farmers are necessary.

The labor force population in Japan continues to decline at an accelerating pace due to the declining birthrate, aging population, and population decline.

Therefore, in all industries, there is a need for a shift change to super-labor-saving and high-quality production by utilizing robotic technology, remote sensing technology utilizing artificial satellites, and ICT, including cloud systems.

In agriculture, labor shortages due to the aging of the population and the reduction in new farmers are conspicuous. Furthermore, it is difficult to acquire experience-backed cultivation technology and work such as planting and harvesting is labor intensive. Compared to other industries, the agriculture industry is in need of technology to support labor-savings, labor reduction, and the development of new farmers.

# Domestic Agricultural Policies

## Rapid Population Decline and the Advent of a Super-aging Society

Establishment and diffusion of smart agriculture

- ① Realize super-labor saving and large-scale production  
(Agriculture automation)
- ② Maximizing crop capabilities  
(Precision farming, utilizing sensing technologies and big-data)
- ③ Liberation from hard and dangerous work  
(Robots, assist suits, etc.)
- ④ Realizing agriculture that is easy for everyone  
(Data compilation of agricultural machinery operation assisting equipment and cultivation know-how)
- ⑤ Providing peace of mind and trust to consumers

Interim report of "Study Group for Realization of Smart Agriculture"

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The policies of the Ministry of Agriculture, Forestry and Fisheries (MAFF) are to achieve super-labor-saving and large-scale production through agriculture automation, to maximize the capacity of crops through precision farming using sensing technology and big-data, and to liberate from hard and dangerous work by utilizing robots, assisted suits, etc., in order to secure labor and improve productivity.

## Smartifying in Farm Work



Agriculture, Forestry and Fisheries Technology Conference

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As indicated here, technologies for smart agricultural work through the use of the IoT are already advancing in various situations, such as automatic tractor driving, remote sensing using drones, fertilizing, and agrochemical spraying.

In the future, it is said that an era will emerge in which all farm work can be managed inside home.

## Participation in Projects of MAFF

### Contract project research

“The Project for the Creation of Future Artificial Intelligence Agriculture  
(development of disease and pest early diagnostic technologies utilizing AI)”  
FY2017- Development of pest diagnosis technology using AI

### Collaborative project

“The Project to Establish Agriculture Model for Improving Productivity Through  
Collaboration Between Agriculture Industry and the Economy”  
FY2018- Workshop on Control Support Systems

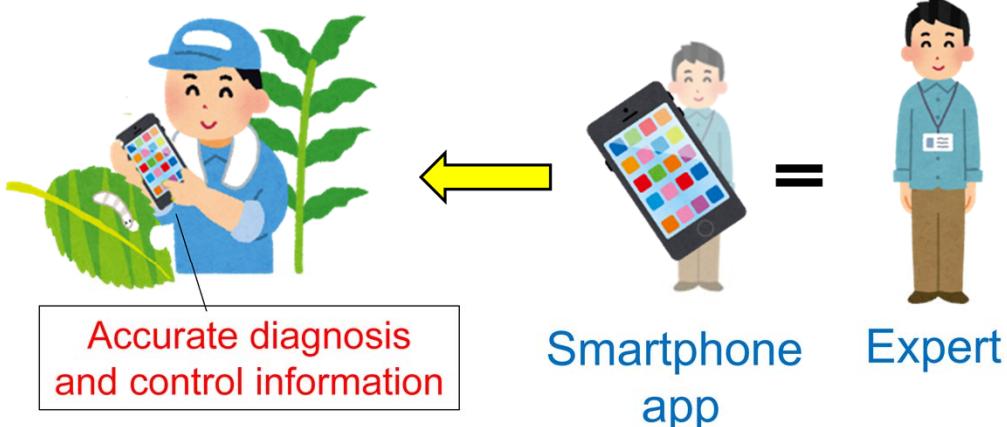
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We are participating in and promoting projects sponsored by the Ministry of Agriculture, Forestry and Fisheries(MAFF) to improve the efficiency and mitigate the burden of agricultural work using smart agricultural technology.

In the “Project for the Creation of Future Artificial Intelligence Agriculture”, we are developing pest diagnosis technology utilizing AI, mainly for fruit and vegetables, which have a large market.

In addition, in the “The Project to Establish Agriculture Model for Improving Productivity Through Collaboration Between Agriculture Industry and the Economy, we are developing a control support system for paddy rice farmers.

## Agriculture knowledge and technology on a smartphone



Developing smartphone app to enable control guidance on par with experts

To use IoT to promote the smart agriculture, we are developing a smartphone app to enable accurate diagnosis and control guidance on par with experts.

## April 2020 Launch (for paddy rice)



- iOS, Android simultaneous release
- Able to diagnose almost all paddy rice pests and weeds
- Planning to expand compatible crops in 2020
- App will be provided for free

\* This app will be released only in Japan

We are planning on full-scale release in April 2020 for a free app capable of diagnosing paddy rice pests and weeds. We are planning to expand compatible crops in 2020.

## One app to solve agricultural issues in the field

- What's the problem? → AI image analysis
- What should I use? → Introduce effective agrochemicals
- How do I use it? → Provide agrochemical information
- When should I use it? → Provide information on weather and pest outbreak predictions

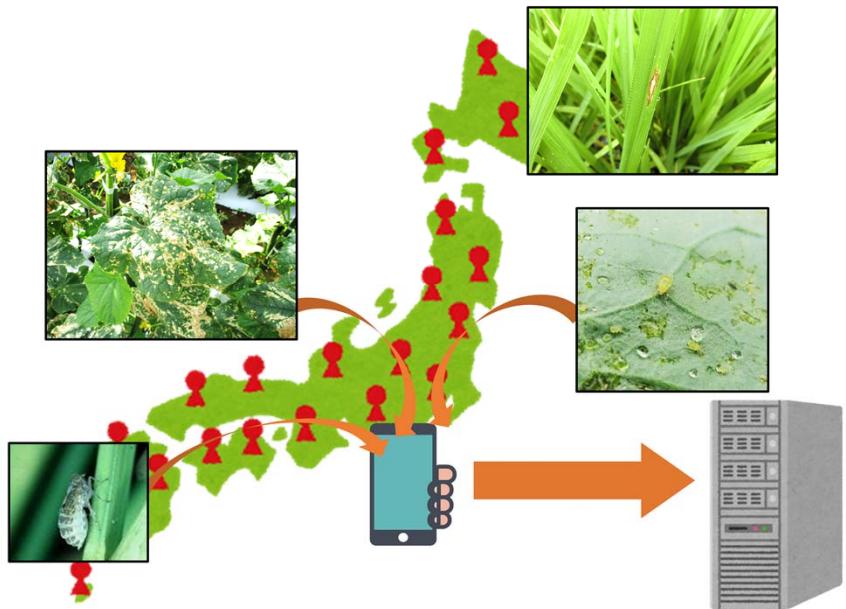


App uses a single picture for guidance on appropriate agrochemical use

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This app uses photos taken with a smartphone to conduct AI-driven image analysis of pests and weeds and provide information on effective agrochemicals and appropriate use. A single app can be used to solve agricultural problems.

## Data-basing Nationwide Diagnosis Results



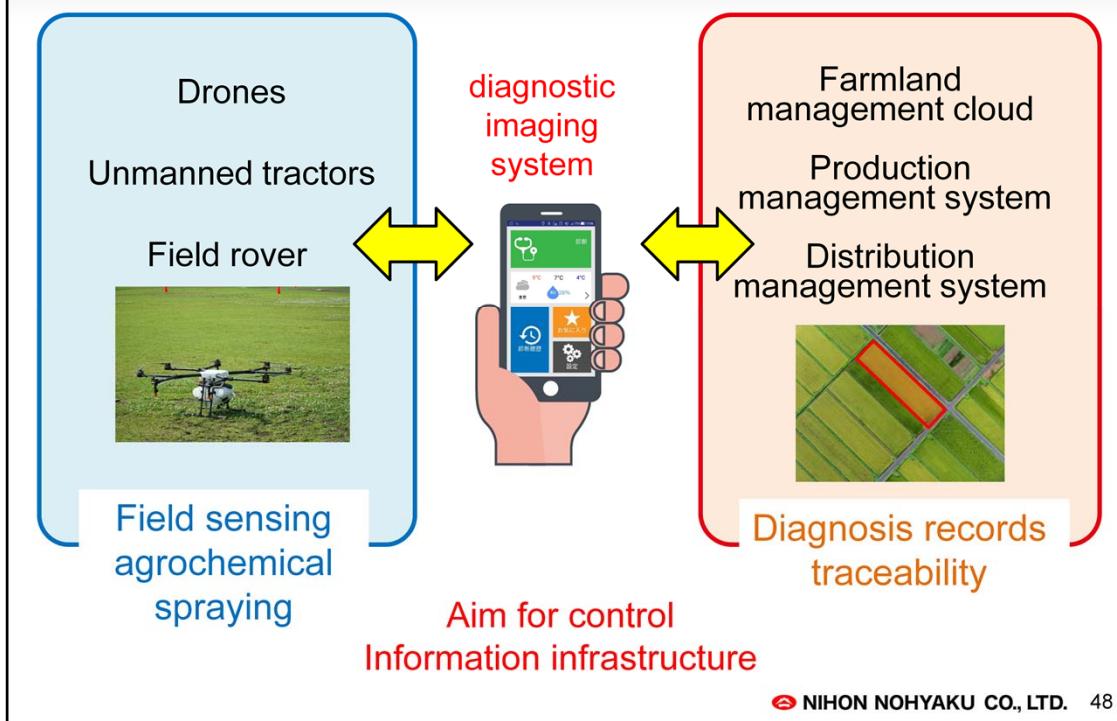
Create new value using accumulated data

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As the number of farmers using our app increases, the big data gathers information about where and what diseases and pests are occurring or convergence.

In the future, we intend to incorporate this into our business activities, such as using it for early recommendations on control, or providing information to the government.

# Building a Proprietary Platform



We intend to diagnose and predict pests and weeds, and use them on a comprehensive IoT basis. We do not yet know what scale of operations will be, but we hope to be able to provide a platform for automatic and optimal control proposals in the future by collaborating with each data.

Operational systems such as drones and unmanned tractors can use this platform to select agrochemicals based on farmland status and easily automate dispersal.

Also, linking information with farm management clouds will improve traceability for crop status and agrochemical use, which will increase trust among consumers.

In this way, we will advance development that drives the industry by using links with other systems to create infrastructure for control information at farms.