

# Nagasaki Agriculture and Forestry Technical Development Center

## OUTLINE



Headquarters(Isahaya-city)



Fruit Tree & Tee Research Unit(Ohmura-city)



Livestock Research Unit (Shimabara-city)



Way of thinking



Middle Mountainous Farming Laboratory(Unzen-city)



Reclaimed Land Farming Laboratory (Isahaya-city)



Tea Laboratory (Higashisonogi-cho)

## Basic philosophy of research and development (Vision)

Development of innovative agriculture and forestry technology from production to consumption that realizes attractive agriculture and forestry that connects with the times and vibrant agricultural and rural.

## Priority themes

1. Cultivation of varieties, stable production technology, and development of pest management technology that respond to global warming
2. Development of production technology that can improve productivity and quality such as smart agriculture and forestry, and cultivation of original varieties.
3. Development of high value-added products focusing on functionality, breeding and cultivation technology for agricultural products used as raw materials.
4. Establishment of farming system for middle mountainous areas and remote islands, and development of agriculture of environmental conservation type.

## Position

Tea Laboratory

Fruit Tree & Tea Research Unit

Reclaimed Land Farming Laboratory

Livestock Research Unit

Agriculture & Forestry Technical Development Center

Middle Mountainous Farming Laboratory

## Facilities and scale of the field

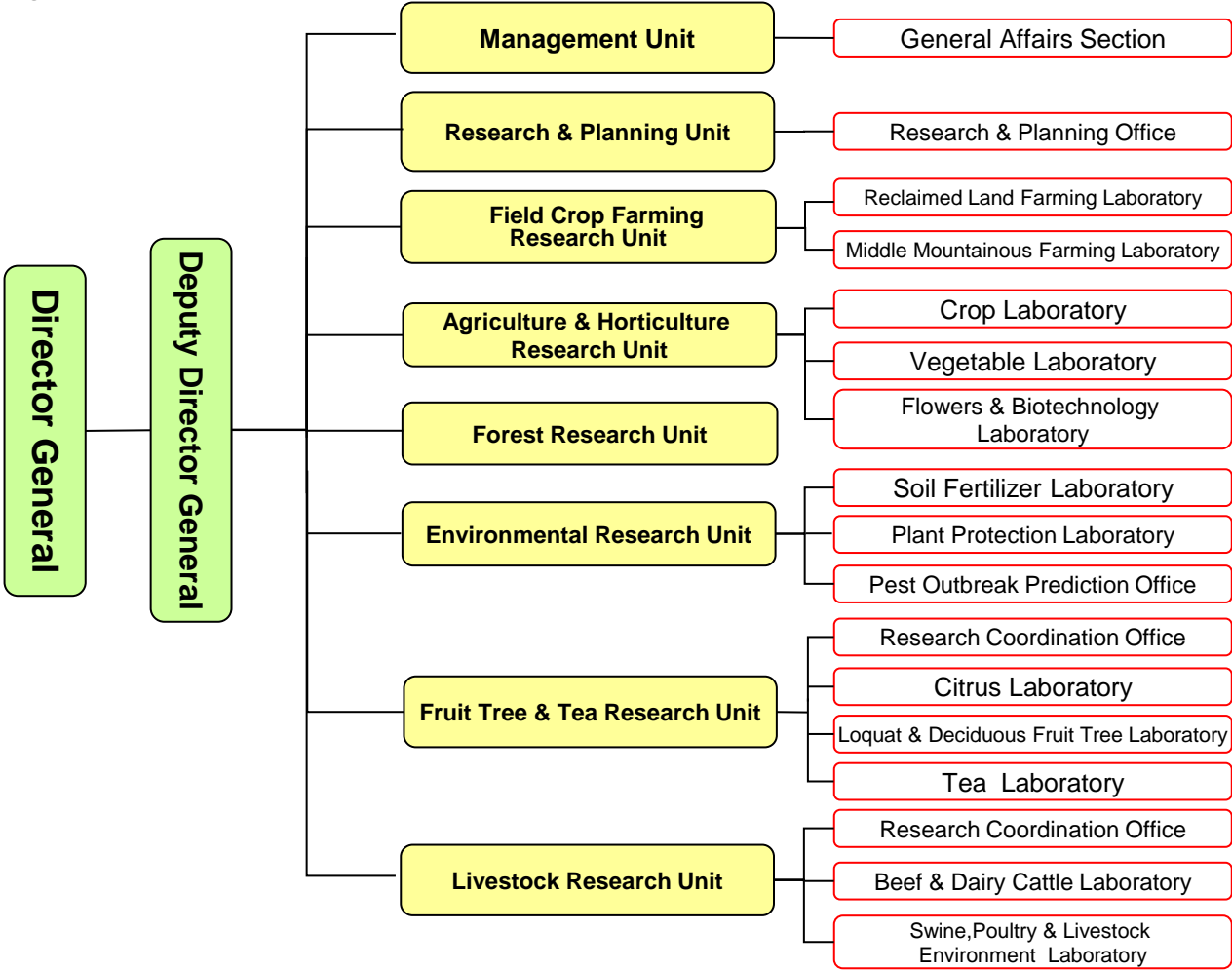
Total 12,734a

## History

- 1898 Agricultural Experiment Station has been installed in the Nagasaki City Nakagawa-cho
- 1920 Moved to Isahaya Eisho-machi
- 1929 Tea industry portion is installed in Higashisonogi
- 1950 The name has changed to Nagasaki Prefecture Agricultural Experiment Station
- 1951 Aino test sites have been installed in Aino-machi
- 1954 Omura gardening minute field is installed in Omura
- 1961 It moved to the present location as Nagasaki Prefectural Agriculture and Forestry Center
- 1971 The name was changed to Nagasaki Prefectural Agriculture, Forestry Experiment Station
- 1972 Fruit Experiment Station (Omura) is an independent
- 1973 Livestock Experiment Station (Ariake-cho) is an independent
- 2003 It became jurisdiction of policy adjustment station which oversees the prefecture 7 research institutes
- 2006 It became jurisdiction of the Science and Technology Promotion Bureau of new
- 2009 3 proving ground integrated restructuring to Agriculture Forestry and Technology Development Center
- 2011 Accompanying the restructuring of Science and Technology Promotion Bureau, transferred to the Ministry of Agriculture and Forestry
- 2021 Reclamation farming research unit and potato laboratory are integrated to become field crop farming research Unit. And pest control station will be integrated to become a pest outbreak prediction office



## Organizational system



## Number of staff

(2025.4.1)

The name of the Unit	Office worker	Researcher	Engineer	Field worker	Sub total	Temporary employee	Total
Director General		1			1		1
Management Unit	10				10	5	15
Research & Planning Unit		6			6	1	6
Field Crop Farming Research Unit		11		3	14	3	17
Agriculture & Horticulture Research Unit		17		6	23	7	30
Forest Research Unit		7		2	9		9
Environmental Research Unit		10	8	1	19	1	20
Fruit Tree & Tea Research Unit	1	16		4	21	4	25
Livestock Research Unit	2	14		15	31	16	47
Total	13	82	8	31	134	37	171

## Management Unit

### Main business

- General affairs and public property, management of agriculture and forestry museum
- Budget, management of the balance sheet and articles

Agriculture and forestry museum



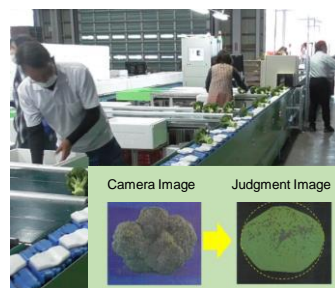
## Research & Planning Unit

### Main research theme

- General Planning of testing and research, training of coordination and research staff
- Promotion of research, public relations activities and weather observation
- Research for regional agricultural development and agricultural management improvement



The general public of the center

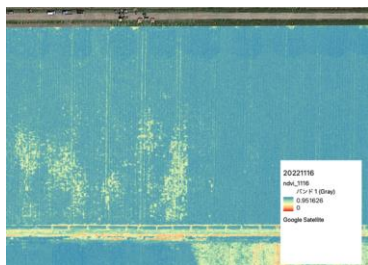


Development and demonstration of AI fruit sorting system

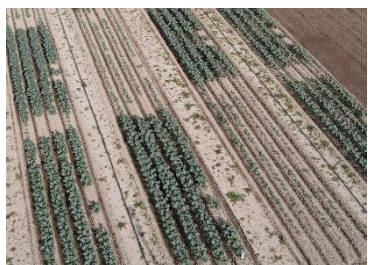
## Field Crop Farming Research Unit

### Main research theme

- Development of smart agricultural technology, labor-saving work and stable production technology for open-field vegetables and potatoes
- Development of large-scale environment-friendly agricultural technology in Isahaya Bay Reclamation Land
- Establishing high-quality production technology for quality elucidation and branding of agricultural products in Isahaya Bay Reclamation Land
- Cultivation of new potato varieties that are resistant to pests and have high yields, and development of cultivation control technology
- Establishing a farming system for major open-field vegetables and potatoes on flat land and middle mountainous areas



Development of technology to grasp the growth status of agricultural crops in large-scale farms(NDVI-value)



Development of large-scale environment-friendly fertilization technology in reclaimed land



Promotion of registration of pesticides for aviation control such as drones, establishment of control system



High-yielding, early-hypertrophic potato varieties 'Aimasari'



## Agriculture and Horticulture Research Unit

### Main research theme

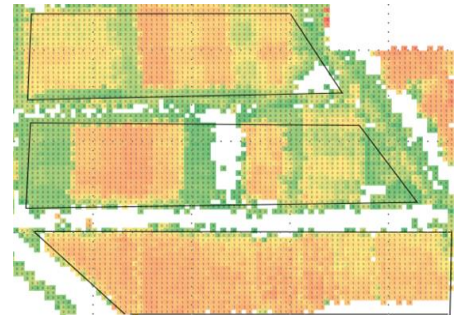
- Variety selection and training such as rice, wheat
- Development of labor-saving, stable and high-quality cultivation techniques, such as rice, wheat
- Cultivation of strawberry varieties and development of facility vegetable cultivation technology
- Development of labor-saving, high-quality cultivation technology of facility vegetables
- Development of breeding and high-quality and stable production technology of flowers
- Breeding of agricultural products by biotechnology



Establishment of cultivation technology for high temperature resistant paddy rice varieties 'Natsuhonoka'



Wheat 'Nagasaki W-2gou' developed for Nagasaki Champon



Development of rice growth diagnostic technology using NDVI values measured by remote sensing



Cultivating varieties of Nagasaki Prefecture's original strawberry



Development of environmental control technology for strawberries and tomatoes



Development of an automated chrysanthemum cultivation system using Artificial Intelligence



Carnation wilt bacterial disease resistant varieties 'Himekaren'



Development of pest resistance DNA marker assay technology



## Forest Research Unit

### Main research theme

- Development of operation model utilizing seedlings with excellent growth
- Research on the practice of smart forestry
- Improvement and development of forest disease and insect harm pest control technology
- Wood resources utilization and processing and shiitake mushrooms, development of cultivation technology of camellia such as non - timber forest products



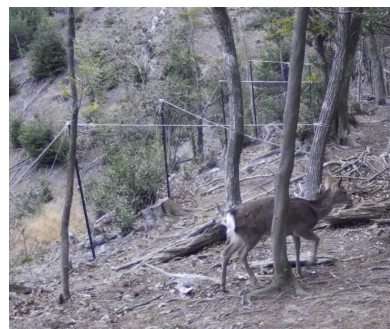
Terrain analysis of Mt.Unzen-Fugen



Development of camellia forest cultivation technology



Development of Japanese cypress elite tree container seedling production technology



Forest conservation from deer damage

## Environmental Research Unit

### Main research theme

- The research on environmental conservation agriculture
- Investigation of soil, the development of the maintenance and improvement of soil fertility technology
- Development of efficient low-cost fertilization technology of rice and vegetables
- Development of ecological elucidation and control technology of crop pests
- Development of Integrated pest management techniques (IPM)
- Prediction of outbreak of pests, investigation of important pest invasion warning
- Test of drug-resistant bacteria and drug resistance



Development of a fertilizer reduction app based on digital soil maps



Development of pest management techniques using natural enemies



Development of pest occurrence forecasting technology



Fruit fly invasion surveillance survey



## Fruit Tree & Tea Research Unit

### Main research theme

- Development of new varieties of loquat and citrus
- Development of high-quality fruit production technology by artificial intelligence quality prediction
- Development of labor-saving, low-cost production technology
- Development of fertilization that are less impact on the environment and pest management techniques
- Development of high quality and high yield cultivation technique of tea
- Development of smart agricultural technology and field demonstration



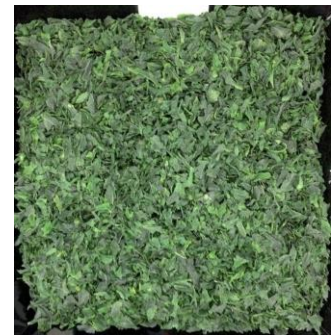
Drone pest control for citrus



Nagasaki original varieties 'Nagasaki-kaken sasebo1gou'



Loquat variety 'Natsutayori' good eating quality and large fruit



Tencha has a strong flavor and the tea leaves have a vivid green color

## Livestock Research Unit

### Main research theme

- Development of breeding management techniques of dairy cattle, beef cattle, swine, chickens
- Biotechnology development of new technology
- Development of technology to improve the quality of Nagasaki of livestock products
- Development of forage crops, pasture-related technology
- Take advantage of unused resources, the development of environmental technology



Development of technologies to improve reproductive performance of cattle



Development of technology to improve the quality of Nagasaki Wagyu beef



Development of technology to reduce feed costs for fattening pigs



Development and demonstration of a wide-area distribution system for pellet compost

Unit	Laboratory	Postal code	Address	TEL	FAX
Nagasaki Agriculture and Forestry Technical Development Center				0957-26-3330	0957-26-9197
Management Unit	General Affairs Section	854-0063	3118,Kaizu-machi Isahaya City	0957-26-4062 0957-26-4295	
Research & Planning	Research and Planning Office			0957-26-4328	
Field Crop Farming Research Unit	Reclaimed Land Farming Research Laboratory	854-0038	131,Tyuoukantaku Isahaya City	0957-35-1272	0957-35-1273
	Middle Mountainous Farming Laboratory	854-0302	Otsu2777,Aino-machi Unzen City	0957-36-0043	0957-36-2697
Agriculture & Horticulture Research Unit	Crop Laboratory	854-0063	3118,Kaizu-machi Isahaya City	0957-26-4350	0957-26-9197
	Vegetable Laboratory			0957-26-4318	
	Flowers & Biotechnology Laboratory			0957-26-4319 0957-26-4326	
Forest Research Unit				0957-26-4292 0957-26-4293	
Environmental Research Unit	Soil Fertilizer Laboratory			0957-26-4381	
	Plant Protection Laboratory			0957-26-4413	
	Pest Outbreak Prediction Office	854-0062	3170,Obunakoshi-machi Isahaya City	0957-26-0027	0957-25-1299
Fruit Tree & Tee Research Unit	Research Coordination Office	856-0021	1370,Onihashi-machi Omura City	0957-55-8740 0957-55-7904	0957-55-6716
	Citrus Laboratory				
	Loquat & Deciduous Fruit Tree Laboratory				
	Tea Laboratory	859-3801	1414,Nakaogo Higashisonogi-cho	0957-46-0033	0957-46-0875
Livestock Research Unit	Research Coordination Office	859-1404	Tei3600,Yue Ariake-cho Shimabara City	0957-68-1135	0957-68-1138
	Beef & Dairy Cattle Laboratory				
	Swine,Poultry & Livestock Environment Laboratory				

#### 【Overview of Nagasaki Prefecture Agriculture and Forestry】

##### ■ Geographical conditions

Nagasaki consists of Islands and peninsula (46% of prefectural land), Arable land are steep slopes are many,it becomes a very complex terrain.

##### ■ Climate

Annual average temperature is 16 ~ 17.5 °C, annual average rainfall is about 2,000mm .It is a warm and rainy climate.

##### ■ Farmhouse number of houses

The total number of farmers is 28,289 units. Selling farmers is 61% of the total farmers in 17,329 households.In addition, full-time number of farmers is 32% of all farmers in 5,524 households.

##### ■ Agricultural output value

Agricultural output value in 2023 is located at 159.0 billion yen. This is the 23rd place nationwide. By item ranking beef cattle, pig, strawberries, potato such as mandarin.

##### ■ Forest area

59 percent of the total land area in the forest area 242 thousands ha, artificial forest area is 104 thousands ha.

##### ■ Forestry output value of forestry

The forestry industry's production value in 2023 is 6.02 billion yen, of which mushrooms will account for 4.5 billion yen and timber production for 1.5 billion yen.