

# Shizuoka Prefectural Research Institute of Agriculture and Forestry

## Shizuoka Plant Protection Office



## Guiding Research Principles

As stated in Shizuoka Prefecture's stated economic and industrial vision, we aim to develop first-rate production and utilization technology and to make Shizuoka's farming and mountain villages attractive to visitors and inhabitants alike.

- (1) Consumption stimulation
- (2) Productivity enhancement
- (3) Restoration of agricultural/mountain villages and forests
- (4) Promotion of interaction opportunities

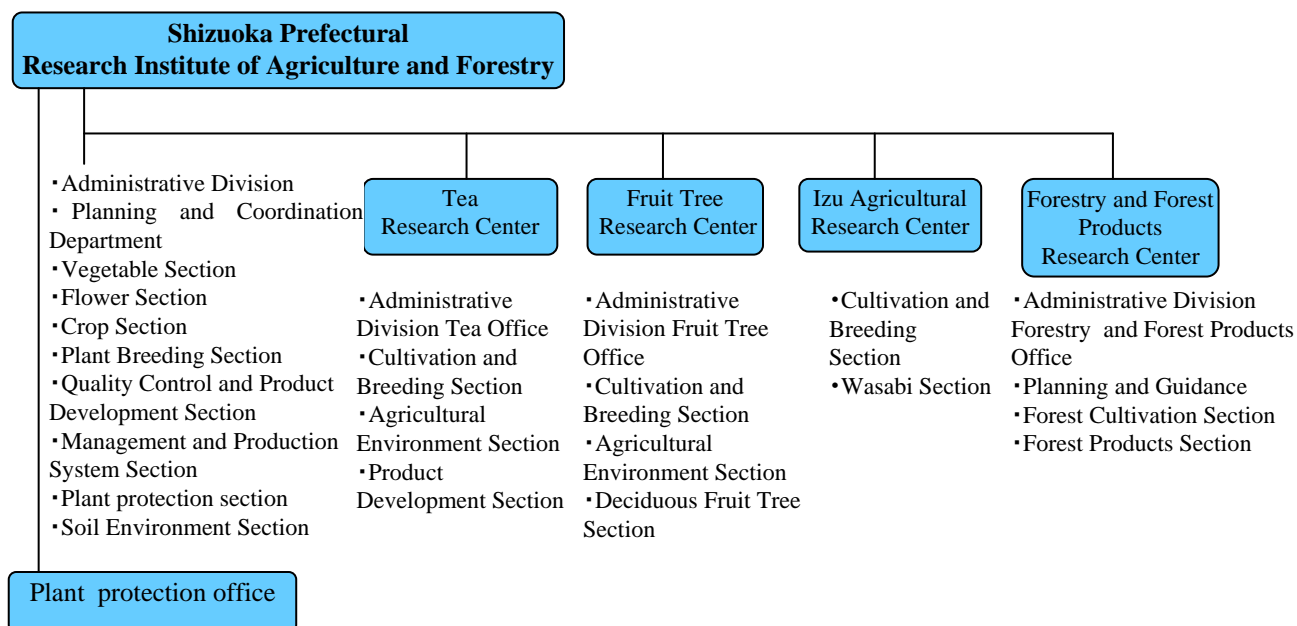
## Objects of Research

- (1) New plant varieties and products that encourage consumption
- (2) Productivity-enhancing technologies for agricultural and high-quality wood products
- (3) Technology supporting resource-reusing agriculture and forestry projects
- (4) Techniques contributing to the creation and conservation of attractive farming and mountain regions

## Timeline

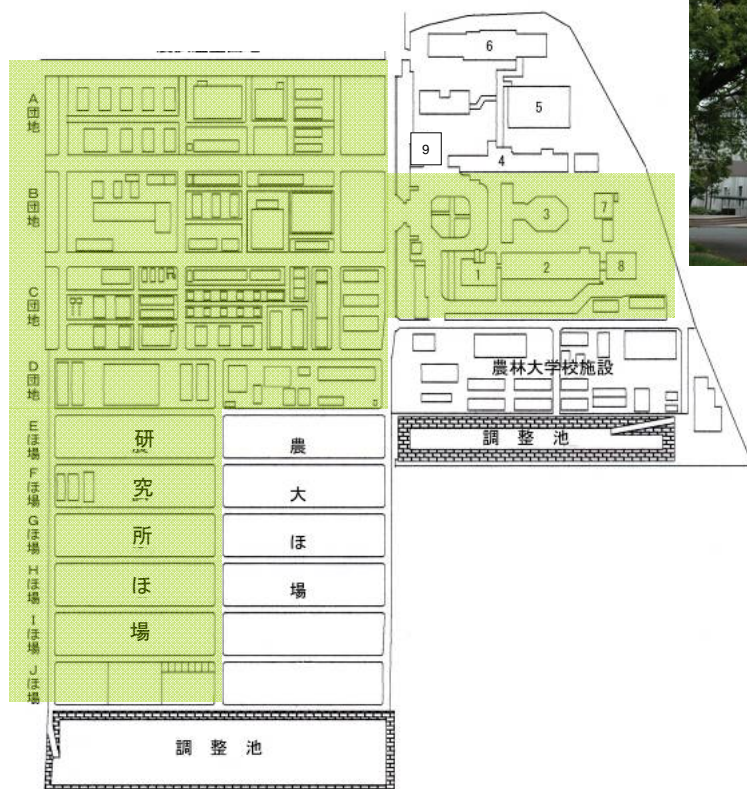
- 1900 Established as "Shizuoka Prefectural Agriculture Experiment Station" in Magarikane, Toyoda Village, Abe-gun (present-day Shizuoka City)
- 1936 Moved to Kitaando, Shizuoka city
- 1956 Renamed "Shizuoka Agricultural Experiment Station"
- 1980 Moved to Toyoda Town, Iwata-gun (present-day Iwata City)
- 2000 Celebrated 100th anniversary
- 2007 Restructured into a new organization and renamed "Shizuoka Prefectural Research Institute of Agriculture and Forestry"
- 2010 Institute reorganized into sections

## Organization





## Map (Head Office)



### Facility Sizes

(m<sup>2</sup>)

Facility	Total	Fields/Orchards	Greenhouses	Other	Building
Head Office	224,070	71,479	7,371	145,220	10,769
Tea Research Center	57,982	31,000	4,527	22,455	5,877
Fruit Tree Research Center	53,904	41,732	3,179	10,921	3,169
Izu Agricultural Research Center	41,083	33,639	830	6,614	1,096
Wasabi Section	4,585	4,299	243	43	417
Forestry Research Center	59,146	6,578	4,088	48,480	4,090

## Department Descriptions

### Planning and Coordination Dept.

Performs research-related activities such as management of research topics and publicity work

- Coordinates research between head office and branch offices
- Supports research through topic setting, evaluation, joint research, etc.
- Manages intellectual property rights (patents, plant variety registration, etc.)
- Publicizes research achievements and encourages their application

## Vegetable Section

Develops technology for stable, year-round vegetable production and for energy-efficient, advanced cultivation environment management



Energy-efficient heat pump technology, which allows for the year-round production of vegetables



Using information on fruit enlargement processes to help manage greenhouse melon cultivation



Light sensors controlling the supply of nutrient solution to hydroponically-grown tomatoes

Newly-developed strawberry variety grown through a process tailored to its special characteristics

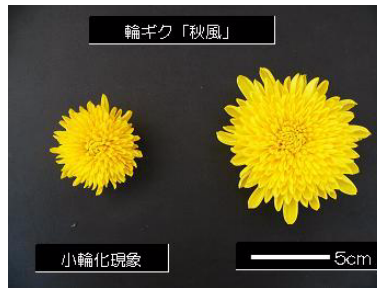


## Flower Section

Conducts research on cultivation techniques and quality preservation for roses, chrysanthemums and gerbera daisies



Heat pumps and evaporative cooling improve the cultivation environment and guaranteed shelf life of roses



Studying the shrinking mechanism of the *Akikaze* chrysanthemum variety in response to heat stress and how to prevent it



Research on causes of and prevention methods for loss of gerbera daisy shelf life

## Crop Section

Studies technology for rice breeding and cultivation and stable cultivation of field crops and conducts seed production projects



40–50 combinations are artificially cross-bred every year



*Homare Fuji* rice; bred through radiomutation, it is highly favorable for sake brewing



V-furrow no-till direct seeding technology, the use of which in dry fields enables labor-saving, low-cost rice production

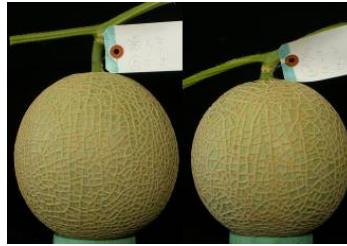


## Plant Breeding Section

Develops new varieties of vegetables and flowers through cross-breeding and radiomutation



X-ray-bred "Cream Nurse" (center) and the original (left)



Ion beam-bred variety able to grow in cold temperatures (left) and the original (right)

*Benihoppe* strawberries, produced through hybridization, possess a rich flavor and substance



## Management and Production System Section

Pursues research on farm management training and the development of labor-saving crop production systems



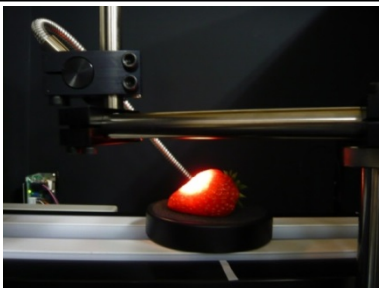
Staff members conduct advanced surveys and analysis of farm management to assist with business growth, in addition to establishing management indices and business development models



Mechanization of harvest of onion to be eaten raw

## Quality Control and Product Development Section

Conducts research regarding quality evaluation and development of agricultural products



Nondestructive strawberry quality testing



Greenhouse melon storage experiment



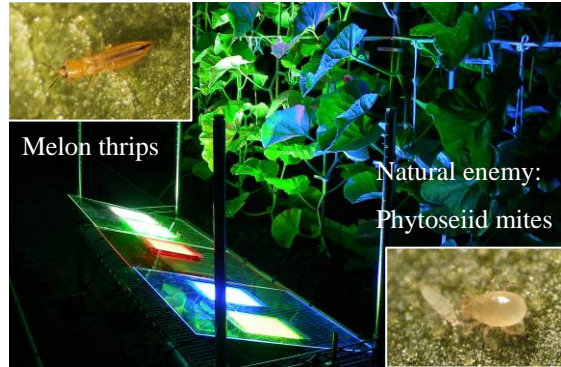
Analysis and quality evaluation of vegetables' functional components and aromas

## Plant protection section

Develops integrated pest management (IPM) technology for major crop diseases and pests



Disease protection experiment on hydroponically-grown butterhead lettuce



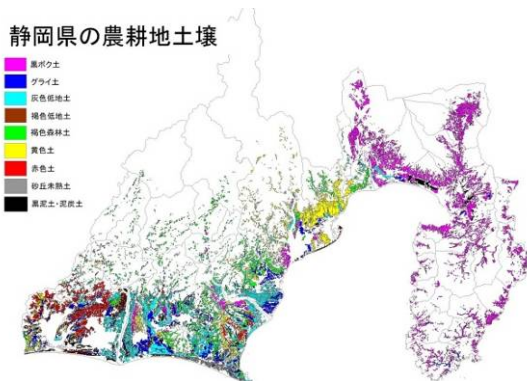
Melon thrips

Natural enemy: Phytoseiid mites

IPM of melon thrips makes use of LED lights and the thrips' natural enemies

## Soil Environment Section

Performs long-term research and surveys on ecological and efficient fertilizer methods and the fecundity of arable soil



Map of arable land in Shizuoka Prefecture



Yield survey



Soil survey

## Plant protection office

Promotes the forecasting of pest outbreaks and safe use of agrochemicals based on the Plant Protection Act



The camellia spiny whitefly, an outbreak of which affecting tea leaves was confirmed in 2010



A light trap for forecasting



The main page of the pest control standards website

(<http://www.agri-exp.pref.shizuoka.jp/boujo/boujo.html>)



## Tea Research Center

Tea is the quintessential crop of Shizuoka Prefecture. The Tea Research Center studies subjects such as the breeding of tea varieties suitable for different regions, labor-saving techniques for plantation management, environmental conservation, and tea processing technology.



Drip brewing allows for a simple and authentic green tea experience

## Fruit Tree Research Center

This center's research focuses on fruit trees, particularly citruses. Here, researchers breed original Shizuoka tree varieties and develop labor-saving, quality-enhancing technology.



*Shizumaru Wase*, a type of fruit bred at the center

## Izu Agricultural Research Center

Research here targets flowers, vegetables, fruit trees and wasabi. This facility's purpose is to promote agriculture in Izu, a region possessing a distinct natural environment and regional resources.



*Furenka*, the first lavender-scented marguerite daisy in the world

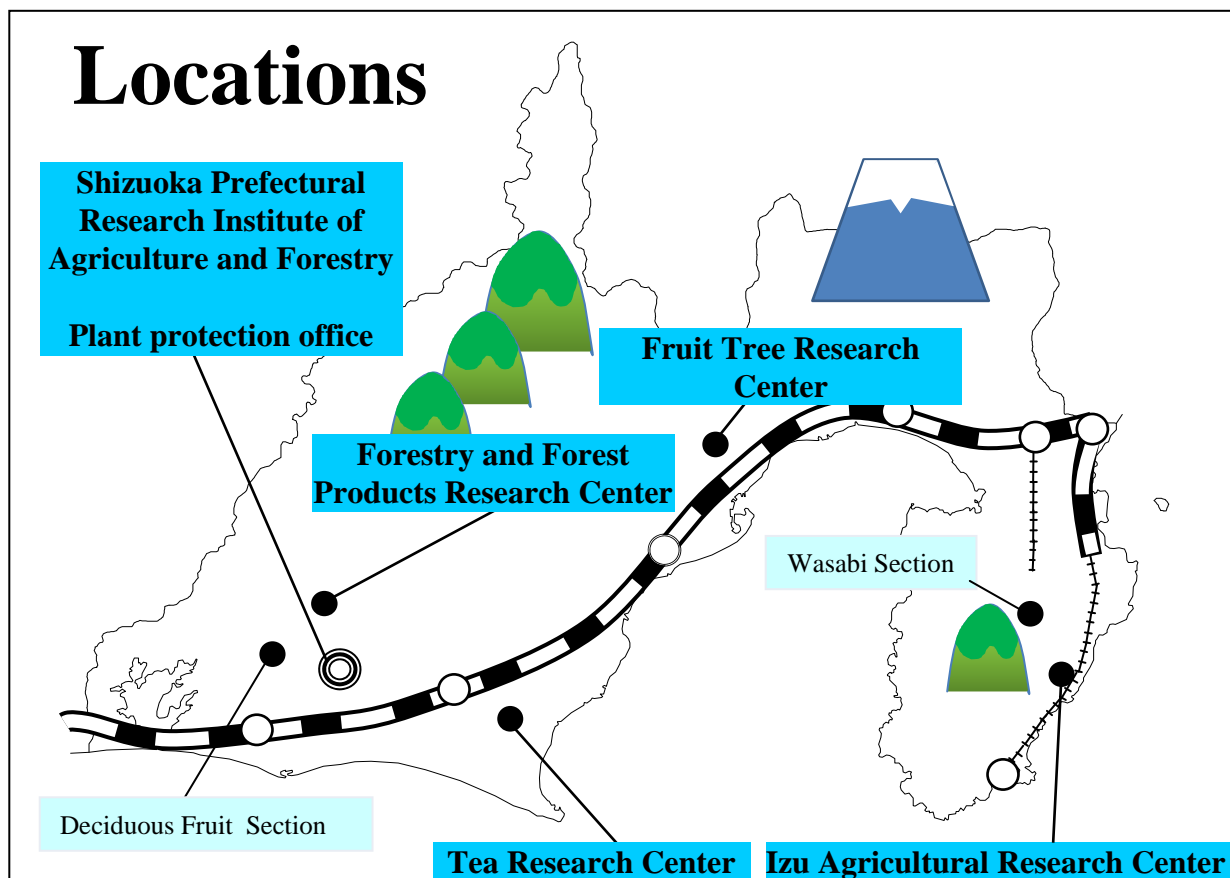
## Forestry and Forest Products Research Center

In addition to studying forest management and edible mushrooms, research here encompasses a variety of other topics, such as the utilization of wood as biomass and the prevention of damage from wild animals.



Non-pollen-producing cedar trees developed at the center

# Locations



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### Plant protection office

Phone: +81(0)-538-36-1543

Fax: +81(0)-538-33-0780

URL: <http://www.agri-exp.pref.shizuoka.jp/boujo/boujo.html>

### Tea Research Center

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### Izu Agricultural Research Center

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Shizuoka Prefecture 413-0411

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### Fruit Tree Research Center

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### Wasabi Section

2860-25 Yugashima, Izu City,  
Shizuoka Prefecture 410-3206

Phone: +81(0)-558-85-0047

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### Deciduous Fruit Section

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### Forestry and Forest Products Research Center

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