

NIAES

Institute for Agro-Environmental Sciences,
National Agriculture and Food Research Organization



Research to be carried out and the mission and vision of NIAES

Achieving both increased production and environment conservation through smart management system

We will achieve highly productive and robust agriculture in the aspect of climate change and the conservation of the global environment through the following five research subjects.

- Realization of both productivity improvement and reduction of greenhouse gas (GHG) emissions by increasing material circulation
- Realization of highly productive agriculture adapted to climate change by the integration of production environment and cultivation management information
- Development of sustainable production infrastructure by data-driven soil management
- Establishment of safe crop production based on the elucidation of the dynamics of hazardous chemicals
- Value creation of agriculture by both agricultural production and healthy ecosystems



We pursue and disseminate technologies that contribute to sustainable agricultural production. We work with environmental research institutions in other fields, and international frameworks, such as IPCC (Intergovernmental Panel on Climate Change) and IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) to demonstrate initiative in Japan and overseas.

Organization Chart

2021.4.1

President Auditor

Senior Vice President Vice President

NARO Headquarters

for Technology Research Headquarters

• RCAIT/NARO

• RCAR/NARO

• NGRC

• NAAC

Segment I

• NFRI

• NILGS

• NIAH

Segment II

• HARC/NARO

• TARC/NARO

• CARC/NARO

• WARC/NARO

• KARC/NARO

• IAM/NARO

Segment III

• NICS

• NIFTS

• NIVFS

• NIAS

Segment IV

• **NIAES**

• NIRE

• NIPP

NCSS

BRAIN

Director

Department of Research Promotion

• Research Promotion Office

Division of Climate Change Mitigation Research

• Innovative Biogeochemical Technology Group

• Mitigation System Group

Division of Climate Change Adaptation Research

• Impact Assessment and Adaptation Group

• Meteorology and Crop Modeling Group

Division of Soil Environment Management Research

• Soil Inventory and Management Group

• Agro-Environmental Informatics Group

Division of Environmental Chemical Research

• Inorganic Chemicals Group

• Organic Chemicals Group

Division of Agroecosystem Management Research

• Biodiversity Conservation and Utilization Group

Division of research

Division of Climate Change Mitigation Research

We conduct research on innovative technologies to reduce greenhouse gas (GHG) emissions from the agricultural sector dramatically in the future and to utilize biodegradable plastic materials in agriculture to reduce labor and plastic waste. We are also engaged in research for accelerating the dissemination of already-developed GHG reduction technologies and developing scenarios for achieving zero-emission agriculture in Japan.



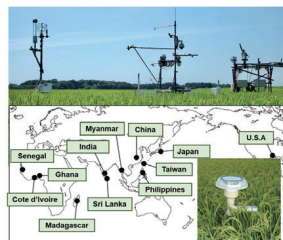
Automatic continuous measurement of GHG



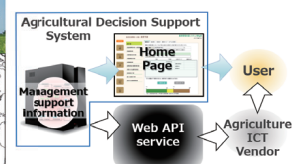
Bamboo biochar application mixed with manure

Division of Climate Change Adaptation Research

We quantify the impact of ongoing and projected climate change on agriculture using the latest climate scenario and evaluate the effectiveness of adaptation measures to help design and implement adaptation plans. We also aim to develop an information system that enhances efficient agricultural management utilizing on-site data from producers.



Micrometeorological observations in paddy fields



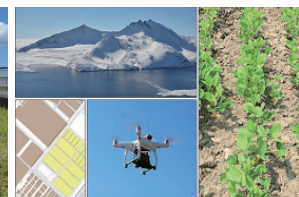
Support system for cultivation management

Division of Soil Environment Management Research

We develop soil management techniques for improving both crop productivity and environmental performance. Our research provides an advanced open platform for soil information for various fields, a database platform of agricultural and environmental information, a better understanding of the nitrogen cycle, and new data collection technologies such as drone observation and the diagnosis of soil and crop nutrition.



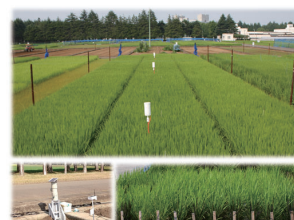
Soil survey in farmland



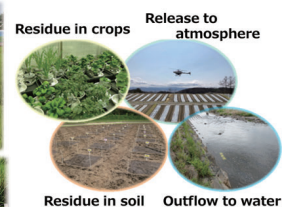
Technologies for data collection and database construction

Division of Environmental Chemical Research

Our division conducts research on agro-environmental dynamics of hazardous chemicals particularly focusing on arsenic, cadmium, radionuclides, and agricultural chemical residues. By understanding the factors controlling plant uptake, we develop technologies to reduce hazardous chemicals in crops and contribute to the production of safe and healthy crops.



Field experiment for reducing arsenic accumulation in rice



Technologies for detection, impact assessment and risk reduction of organic chemicals

Division of Agroecosystem Management Research

We advance research on connecting the ecosystem services with the interests of agriculture and the public benefits by managing agricultural land and surrounding ecosystems in a healthy state and creating a production environment that is robust against invasive alien species and nurturing a rich biota.



Innovative golden mussel research using environmental DNA technology



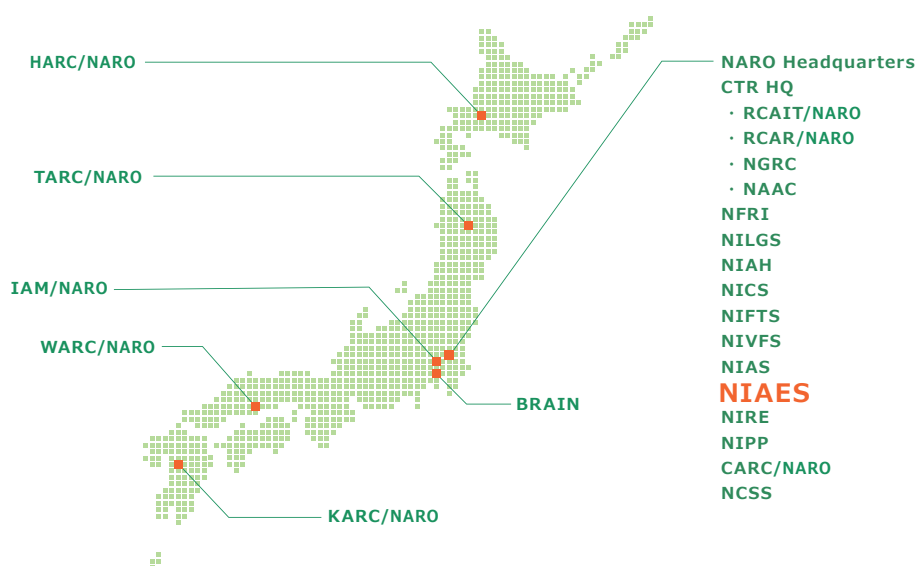
Newly discovered native bumblebee as a pollinator of Japanese persimmon

History and Location

History

- 1893 National Agricultural Experiment Station
- 1950 National Institute of Agricultural Sciences
- 1983 National Institute of Agro-Environmental Sciences
- 2016 Institute for Agro-Environmental Sciences, NARO

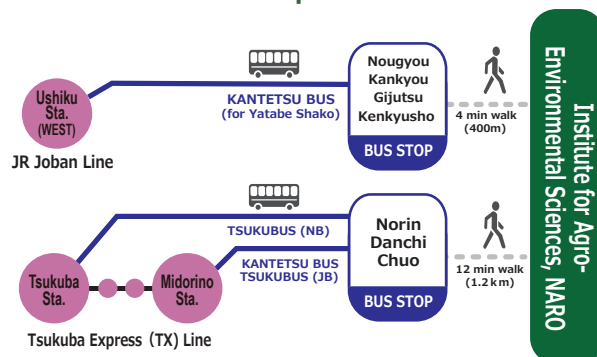
Map



Access



Public transportation



Location

3-1-3 Kannondai, Tsukuba, Ibaraki 305-8604, Japan

Contact

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