

[Separate table] Recruitment of Permanent research scientists

No.	Institute *1	Research Division *1	Location	Research Title	Research Program *2
P1	NARO Institute of Fruit Tree Science (NIFTS)	Apple Research Division	Morioka, Iwate	Development of highly profitable production practice of apples suitable for environmental conditions in the disaster area	(1) Development of production practice of high quality apples adapted for soil conditions in the disaster area, utilizing drip irrigation and liquid fertilization methods combined with year-round plastic mulching system (2) Development of production practice of red-flesh apples taking advantage of climate conditions in the disaster area  Keywords: rapid establishment of productive orchards, training system, water and fertilizer management, fruits for processing, functional components
P2	NARO Institute of Fruit Tree Science (NIFTS)	Plant Physiology and Fruit Chemistry Division	Fukushima, Fukushima (residence)	Development of soil management practice contributing to rapid establishment of productive orchards in the disaster area.	(1) Development of soil management practice to promote the growth of nursery stock of fruit tree (2) Development of soil management practice to enable the fruit production in the disaster area  Keywords: rapid establishment of productive orchards, radioactive cesium, Japanese pear, Japanese chestnut, persimmon, blueberry
P3	National Institute for Rural Engineering (NIRE)	Hydraulic Engineering Research Division	Tsukuba, Ibaraki	Development of rural drainage technologies to protect from long-term salt damage on crops cultivated in tsunami-damaged coastal area	(1) Development of forecasting system of salt transportation accompanying irrigation and drainage in coastal agricultural area (2) Development of irrigation/drainage management technologies for protecting salt damage on crops based on the monitoring and forecasting of salt transportation  Keywords: saltwater intrusion, irrigation/drainage network, rural drainage modelling, information and communication technology (ICT), real-time forecasting
P4	National Food Research Institute (NFRI)	Food Function Division	Tsukuba, Ibaraki	Elucidation and analysis of food functionalities against homeostatic disturbances, primarily on antioxidant activities for increasing the added value of the agricultural products in the Great East Japan Earthquake affected areas	(1) Evaluation of health promoting compounds focused on antioxidant activities of agricultural products harvested in disaster-affected area (2) Kinetics analysis of health promoting compounds focused on antioxidant activities in the processing, distribution and cooking process, and proposal of dietary guidelines for health promotion (3) Elucidation of the effectiveness of antioxidant ingestion on oxidative stress in vivo  Keywords: functionalities against homeostatic disturbances, anti-aging, measurement of lipid peroxidation in vivo, oxidative stressed animal model, cell signaling
P5	National Food Research Institute (NFRI)	Food Safety Division	Tsukuba, Ibaraki	Kinetics analysis of radioactive cesium in food.	(1) Elucidation of the elution mechanism of radioactive cesium in the processing and cooking process of food (2) Advance and dissemination of quality control in the radioactivity measurement of food  Keywords: quality control, reference materials, proficiency testing

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P6	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agro-Environment Research Division	Morioka, Iwate	Development of usage technology of the long and medium term weather forecast data for the farming management systems adaptable in the area of the Great East Japan Earthquake.	(1) Development of an optimized downscaling procedure of the long and medium term weather forecast data, and development and evaluation of a crop management support system using crop growth models (2) Development of risk assessment tools in meteorological and pest damages using numerical meteorological prediction data in the area of the Great East Japan Earthquake, and implementation and evaluation of the tools on crop management and early warning systems  Keywords: agricultural meteorology, meteorological data, ensemble prediction, geographic information systems
P7	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Elucidation of the mechanism to suppress the radioactive cesium transfer by potassium in rice.	(1) Developing a model to describe the radioactive cesium uptake mechanism from soil solution to rice (2) Analysis of the effect of potassium application on the radioactive cesium uptake by rice based on the cesium uptake model (3) Elucidating the effect of potassium application on the mechanism of radioactive cesium distribution in plant organs  Keywords: screening test of different varieties, hydroponic culture, rhizosphere environment
P8	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Development of a management tool for vegetation of the agricultural field before and after decontamination.	(1) Developing a management tool for weed control before and after decontamination of the agricultural field (2) Develop a preservation tool of the agricultural field after decontamination  Keywords: soil erosion, weed of levee, buried seed, soil dressing
P9	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Developing countermeasures for wild animals damage to support the farming resume in the Great East Japan earthquake disaster area.	(1) Actual damage analysis caused by wild animals in the Great East Japan earthquake disaster area (2) Establish and spread countermeasures for wild animals damage to support the farming resume in the evacuated area  Keywords: wild boar, monkey, damage prevention technology, guidance to farmers
P10	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Development of a management tool on the regulation of radioactive cesium for the agricultural dams and ponds.	(1) Developing a monitoring system of radioactive cesium in agricultural water (2) Developing an estimation method for inflow/outflow amount of radioactive cesium of paddy fields and/or irrigation and drainage facilities  Keywords: suspended form of radioactive cesium, dissolved form of radioactive cesium
P11	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Development of a recycling technology system of organic decontamination waste materials.	(1) Development of a volume reduction method of organic waste from decontamination practices and its application as combustion fuels (2) Development of a nutrient cycling system using dry methane fermentation residues and composts  Keywords: biomass plant, recycling system

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P12	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Screening soybean genetic resources with low radioactive cesium uptake and elucidation of the mechanism.	(1) Developing soybean varieties with low radioactive cesium uptake from the agricultural fields of the Great East Japan earthquake disaster area (2) Elucidating the mechanism of high uptake ability of radioactive cesium of soybean  Keywords: genetic analysis, ICP-MS, ionome analysis
P13	NARO Tohoku Agricultural Research Center (NARO/TARC)	Field Crop and Horticulture Research Division	Morioka, Iwate	Development of a large-scale cultivation system of the open-field vegetable in the paddy field of tsunami stricken area.	(1) Development of an optimal fertilizing system and an efficient irrigation system for an open-field vegetable cultivation in the paddy field of tsunami stricken area (2) Development of an open-field vegetable cultivation system, especially emphasizing the growth control and extension of the harvesting period for the large-scale machinery in the paddy field of tsunami stricken area  Keywords: vegetable science, soil plant nutrition, local fertilizing, cultivar, mechanization system of open-field vegetables
P14	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Research analysis of the behavior of radioactive cesium in the agricultural fields.	(1) Mechanism analysis of radioactive cesium transfer to plant in the agricultural fields of the Great East Japan earthquake disaster area (2) Developing medium/long term farming guideline based on the radioactive cesium behavior in the agricultural fields  Keywords: soil fertility, aging, paddy field management
P15	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Evaluating the sorption and desorption of radioactive cesium and potassium on the clay minerals, and developing countermeasures to regulate the radioactive cesium transfer to crops using application of clay mineral materials.	(1) Elucidating the mechanism of cesium and potassium supply to the soil solution and sorption to the minerals by the different clay species (2) Developing countermeasures to suppress the transfer to crops of radioactive cesium by using application of clay mineral materials  Keywords: X ray diffraction instrument, differential thermal balance
P16	NARO Tohoku Agricultural Research Center (NARO/TARC)	Agricultural Radiation Research Center	Fukushima, Fukushima	Elucidating the dynamics of environmental radioactive materials by high precision analysis, and the transfer mechanism of radioactive materials from soil to plant.	(1) High precision analysis of radioactive materials in the soil, water and plant samples taken from the Great East Japan earthquake and subsequent nuclear power plant accident disaster area (2) Dynamic analysis of radioactive materials under co-existence of soil minerals and organic compounds (3) Analysis of the effect of the dynamics of radioactive materials on the uptake and accumulation of the materials by plants  Keywords: germanium semiconductor detector, imaging plate, growth experiment
P17	NARO Western Region Agricultural Research Center (NARO/WARC)	Hillside Horticulture Research Division	Zentsuji, Kagawa	Development and demonstration of innovative technologies for sustainable and stable production system in greenhouse horticulture in the hilly/semi-mountainous areas	(1) Development of low cost renovation techniques for mainly small-scale greenhouses (2) Development of the communication tools using ICT for promoting new production technologies and supporting to build regional collaborative relationships  Keywords: agricultural environmental engineering, sensing, usage of regional resources, limited production of a wide variety of goods, regional collaborative relationships

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P18	NARO Kyushu Okinawa Agricultural Research Center (NARO/KARC)	Lowland Farming and Horticulture Research Division	Chikugo, Fukuoka	Development of the breakthrough technology for yield enhancement based on the identification of the agronomic causes of the yield stagnation in wheat and rice.	(1) Analysis of the yield limitations observed in field-grown wheat and rice plants from the viewpoint of crop science (2) Development of the agronomic technologies for enhancing crop yield in rice and wheat plants  Keywords: crop science, rice, wheat, high yielding, agronomy
P19	NARO Kyushu Okinawa Agricultural Research Center (NARO/KARC)	Upland Farming Research Division	Kurume, Fukuoka	Analysis of physiological mechanism for low cost, high yield, high quality and high value added production of vegetables using plant factory for revitalization from disaster by the Great East Japan Earthquake	(1) Analysis of physiological mechanism such as varietal characteristics and environmental responses of vegetables under artificial lighting (2) Investigation of environmental conditions for low cost, high yield, high quality and high value added production of vegetables in closed type plant factory  Keywords: plant physiology, molecular biology, leafy vegetables such as leaf lettuce, sprouts, health functional component

\*1 Name of research institute and research division would be changed due to a merger of organization scheduled in April 2016, but location and research program will not be changed.

\*2 Research project of the NARO can be referred to the following site: <http://www.naro.affrc.go.jp/english/research/index.html>