

[Separate table] Recruitment of fixed-term research scientists

No.	Institute	Research Division	Location	Research Title	Research Program *	Program Director	Project Leader	Principal Investigator
N01	NARO Agricultural Research Center	Farm Mechanization Division	Tsukuba, Ibaraki	Technology development project for practical application of farm operation robots	(1) Study the ensuring of safety during autonomous operation and the effectiveness of multi-robot operation (2) Study the optimization of farm operation robot management Keywords: field robotics, image processing, Kalman filter	Hisashi Hosokawa	Katsuhiko Tamaki	Katsuhiko Tamaki
N02	NARO Institute of Crop Science(NICS)	Rice Research Division	Tsukuba, Ibaraki	Accelerating the breeding of rice cultivars with high yield and heat stress tolerance, using genomic tools, and developing new related breeding methods and resources	(1) Support for accelerating the breeding of rice cultivars with high yield and heat stress tolerance, through marker-assisted selection (2) Developing new related breeding methods and resources by applying genomic tools Keywords: genomic selection, DNA marker, rice, breeding support	Masahiro Yano	Masayuki Yamaguchi	Masayuki Yamaguchi
N03	NARO Institute of Crop Science(NICS)	Rice Research Division	Tsukuba, Ibaraki	Elucidation of physiological and genetic complex factors improving the yield potential of rice, and development of high yielding lines using genome information	(1) Elucidation of novel physiological and genetic factors to improve the yield potential of rice (2) Analysis of the interactive functions of multiple factors related to the yield potential of rice (3) Development of high yielding lines in which multiple factors contributing to increased yield potential, such as sink size and source ability, are pyramided Keywords: genome information, physiological factor	Masahiro Yano	Motohiko Kondo	Motohiko Kondo
N04	NARO Institute of Fruit Tree Science(NIFTS)	Breeding and Pest Management Division	Tsukuba, Ibaraki	Analysis of the occurrence dynamics of invasive pests in the Kyushu-Okinawa Region, and development of countermeasures	(1) Elucidation of the routes of invasion and dispersal of citrus greening in the Kyushu-Okinawa region (2) Development of suitable countermeasures against citrus greening in the Kyushu-Okinawa region Keywords: fruit tree, bacteria, molecular genetic-based identification, artificial culture	Ken-ichiro Honda	Yasuo Ohto	Ryoji Nakaune

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N05	NARO Institute of Fruit Tree Science(NIFTS)	Plant Physiology and Fruit Chemistry Division	Tsukuba, Ibaraki	Assessment of climate change impact on fruit trees, and elucidation of the mechanisms underlying damage caused by global warming	(1) Highly accurate evaluation of the impact of global warming on fruit tree cultivation, especially in warm regions (2) Elucidation of the mechanisms underlying freezing damage to deciduous fruit trees, using an agrometeorological approach Keywords: a grometeorology, growth prediction, estimation for suitable area, early warning system	Tomonari Watanabe	Takaya Moriguchi	Toshihiko Sugiura
N06	NARO Institute of Floricultural Science(NIFS)	Ornamental Plants Research Division	Tsukuba, Ibaraki	Development of postharvest technology for ornamental plants, using plant growth regulators and gas composition control	(1) Analysis of plant growth regulators during vase life, and biochemical responses to control of gas composition, in cut flowers (2) Development of postharvest technology for cut flowers, using plant growth regulators and gas composition control Keywords: biochemistry, postharvest physiology, postharvest technology	Toshio Ohtani	Masaru Nomura	Hiroko Shimizu-Yumoto
N07	NARO Institute of Vegetable and Tea Science(NIVTS)	Vegetable Pest Management and Postharvest Division	Tsu, Mie	Development of control methods for serious insect pests on vegetables, using artificial light or colored materials	(1) Analysis of the behavioral response of small insect pests to various forms of artificial light or colored materials (2) Development of new physical control methods for insect pests, using artificial light or colored materials in greenhouses Keywords: vegetable insect pests, thrips, whiteflies, physical control methods for insect pests	Ken-ichiro Honda	Chie Goto	Mitsuyoshi Takeda
N08	NARO Institute of Vegetable and Tea Science(NIVTS)	Vegetable Breeding and Genome Division	Tsu, Mie	Integrated omics analysis of physiological mechanisms for the improvement of fruit yield and quality in tomato	Study of physiological and molecular mechanisms for the production of high yield and quality fruit in tomato, through integrated omics analysis Keywords: gene function, transcriptional regulation, enzymology, greenhouse horticulture	Akio Kojima	Hiroyuki Fukuoka	Syunsuke Imanishi

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N09	NARO Institute of Vegetable and Tea Science(NIVTS)	Vegetable Production Technology Divison	Tsukuba, Ibaraki	Development of light-environment control technologies for advanced vegetable production in greenhouse	(1) Study of the physiological and ecological responses of fruit vegetables (tomato, cucumber, paprika, etc.) to precisely controlled light intensity and spectrum in greenhouse (2) Development of an effective supplementary lighting system for high yield and quality production of fruit vegetables in greenhouse (3) Improvement in the growth of fruit vegetables in greenhouse under excess amounts of solar radiation, using covering materials with light-control functionality Keywords: integrated environment control, light-emitting diodes (LED), plant factory, covering materials for light control	Akio Kojima	Akimasa Nakano	Akimasa Nakano
N10	NARO Institute of Vegetable and Tea Science(NIVTS)	Tea Research Division	Shimada, Shizuoka	Development of techniques for desterilizing little-used organic matter, and evaluation of the effects of organic matter application on nitrous oxide emissions in tea field	(1) Elucidation of the decomposition characteristics of little-used organic matter, and the dynamics of plant nutrient derived from the organic matter, in tea field soils (2) Elucidation of the effects of organic matter application on nitrous oxide emissions from green tea fields Keywords: livestock waste compost, food manufacturing residue, greenhouse effect gas, plant nutrient management	Naoto Kato	Shigeru Takahashi	Kunihiko Nonaka
N11	National Institute of Animal Health(NIAH)	Influenza and Prion Disease Research Center	Tsukuba, Ibaraki	Study of defensive mechanisms against animal influenza	(1) Analysis of host genes that influence influenza virus replication in infected hosts (2) Understanding of animal influenza virus ecology for development of protective measures Keywords: avian influenza, swine influenza, vaccines, innate immunity	Tomoyuki Tsuda	Takehiko Saito	Takehiko Saito
N12	National Institute of Animal Health(NIAH)	Dairy Hygiene Research Division	Sapporo, Hokkaido	Development of diagnostic and control measures for bovine mastitis	(1) Development of mucosal vaccine for Staphylococcus aureus bovine mastitis (2) Development of prevention technologies for farm animal infectious diseases, through elucidation of the mucosal immune system Keywords: bovine mastitis vaccine, mucosal lymphoid system, immunohistochemistry, MALT, bovine mastitis models	Tomoyuki Tsuda	Tomohito Hayashi	Tomohito Hayashi

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N13	NARO Institute for Rural Engineering(NIRE)	Hydraulic Engineering Division	Tsukuba, Ibaraki	Development and implementation of a wide-area hydrology and water resources information system for labor-saving water management enabling large-scale agriculture progress	(1) Development of a data collection system for hydrology and water resources, for forecasting meteorological phenomena, water resources, on-farm ponding depth and related groundwater level , based on labor-saving water management at the regional level (2) Implementation of a water resources information system supporting on-farm block water management Keywords: meteorological data, water resources, pump・gate・inlet, meteorological disaster, extreme events, information and communications technology	Takeshi Koizumi	Tomijiro Kubota	Norio Nawa
N14	NARO Food Research Institute(NFRI)	Applied Microbiology Division	Tsukuba, Ibaraki	Development of next-generation fermentation technology for advanced utilization of rural agricultural products	(1) Elucidation of the relationship between fermented food microflora and food ingredients related to quality, sensory properties and health-promoting functions (2) Development of control methods for microbial metabolism of food ingredients related to quality and sensory properties, and health-promoting functions, in fermented foods Keywords: complex microbial fermentation, omics analysis, metagenomics analysis, metabolic engineering	Toshio Ohtanhi	Susumu Okamoto	Toshihide Nakamura
N15	NARO Food Research Institute(NFRI)	Food Resource Division	Tsukuba, Ibaraki	Profile analysis of fatty acid related compounds in food	Development of comprehensive analytical methods for lipids and fatty acids in food Keywords: chemistry, chromatographic separation, instrumental analysis	Toshio Ohtani	Hikaru Hemmi	Wakako Tsuzuki
N16	NARO Agricultural Research Center for Hokkaido Region (NARCH)	Dairy Production Reaearch Divison	Sapporo, Hokkaido	Creating low-cost production and utilization technology for Premium Ear Corn and other grains grown in Japan	(1) Development of a low-cost preservation method, with high distribution performance, for corn grain harvested in Japan (2) Evaluation of the feed characteristics of Japanese corn grain silage (Premium Ear Corn: high moisture shelled corn (HMSC) or corn cob mix (CCM)) (3) Development of efficient feeding technology for dairy cows, utilizing Premium Ear Corn Keywords: forage processing and evaluation, feeding management, corn	Hiroshi Dohi	Tomoko Oshita	Tomoko Oshita

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N17	NARO Agricultural Research Center for Hokkaido Region (NARCH)	Agro-environmental Research Divison	Sapporo, Hokkaido	Molecular epidemiological analysis and improvement of diagnostic methods for damaging bacterial diseases of potato, the main crop in the cold regions of Japan	(1) Molecular identification of causal agents of potato blackleg in Japan (2) Molecular epidemiological analysis of potato blackleg in Japan (3) Improvement of diagnostic methods and genetic diversity analysis of potato blackleg in Japan Keywords: molecular analysis, bacterial diseases, phytopathology	Ken-ichiro Honda	Shinya Tsuda	Takato Nakayama
N18	NARO Agricultural Research Center for Hokkaido Region (NARCH)	Large-scale Farming Research Divison	Memuro, Hokkaido	Development of cultivation technology to improve efficiency in the processing and harvesting of vegetables for large-scale supply to factories	(1) Development of cultivation technology to increase the bulb size of onion varieties with broad elliptic bulb shape, using early growth stimulation technology such as spot fertilizer application (2) Development of early growth control technologies to standardize the size of cabbage seedlings after machine planting Keywords: broad elliptic bulb onion "KAROE-ONE", fertilization, establishment of seedlings	Akio Kojima	Hiroyuki Tsuji	Hiroyuki Tsuji
N19	NARO Agricultural Research Center for Tohoku Region (NARCT)	Agro-Production Technologies and Management Division	Morioka, Iwate	Research into the establishment of a high-profit paddy farming business model based on vertical farming activities, through utilization of new types of rice grains and special local agricultural products	(1) Research into customer and commercial demand for new processed agricultural goods made from new types of rice grain such as pigmented rices and special local products (2) Establishment of a high-profit paddy farming business model based on the interrelationship between the agricultural, processor and distributor sectors for new processed agricultural goods (3) Determination of support measures regarding local branding of new processed agricultural goods, and elucidation of the beneficial effects on the community of value improvement in processed agricultural goods Keyword: agricultural promotion, selling strategy , business diversification, regional simulation	Tsuneo Nihei	Akihiro Takahashi	Hirotake Miyaji
N20	NARO Agricultural Research Center for Kyushu Okinawa Region	Livestock and Grassland Research Division	Koshi, Kumamoto	Promotion of bovine reproductive performance activation under heat stress conditions, using functional feed ingredients	(1) Determination of the effect of functional feed ingredients on bovine reproductive function (2) Promotion of feeble estrus prevention and high fertility in cows, using functional feed ingredients Keyword: animal reproduction, cow, fertility, feed ingredients	Tomonari Watanabe	Takashi Osada	Naoki Takenouchi