

Title of Papers Presented at the 131st Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 Mutant selections of self-incompatibility plant, Radish (*Raphanus sativus* L. var. *sativus*), by 2step-TILLING

☆Kohzuma, K. ^{1,3}, M. Chiba ^{1,3}, T. Anai ⁴, M. Ueda. U ¹, R. Oguchi ¹, K. Hanada ^{2,3}, K. Hikosaka ^{1,3}, N. Fujii ^{1,3} (1.Grad. Sch. Life Sciences, Tohoku Univ., 2.Frontier Research Academy for Young Researchers, Kyusyu Ins. Tech., 3.CREST, 4.Faculty of Agriculture, Saga Univ.)

102 Efficient breeding of double-flowered gentian plants using molecular DNA marker

Tasaki, K. ¹, A. Higuchi ¹, K. Fujita ¹, A. Watanabe ¹, N. Sasaki ¹, K. Fujiwara ², H. Abe ³, Z. Naito ³, H. Kawamura ³, T. Hikage ⁴, R. Takahashi ⁴, ○M. Nishihara ¹ (1.Iwate Biotech. Res. Cent., 2.Iwate Agr. Jr. Col., 3.Iwate Agr. Res. Cent., 4.Hachimantai City Floric. Res. Dev. Cent.)

103 Introduction of DENSE AND ERECT PANICLE 1 (DEP1) to high yield and good eating quality rice cultivar 'Akidawara' using sBBS

○Tanaka, J. ¹, Y. Taniguchi ², T. Ishii ¹ (1.NICS, 2.NIAS)

104 Mutant cultivars developed and released in Japan

○Nakagawa, H. ^{1,2} (1.Hamamatsu Photonics K. K., Central Res. Lab., 2.NIAS, IRB)

105 Development of low-calorie and functional rice for food application 1. Single-dose administration human trial

○Fujita, N. ¹, Y. Saito ², M. Takahara ¹, Y. Hosaka ¹, N. Crofts ¹, T. Watanabe ² (1.Facult. Biores. Sci., Akita Pref. Univ., 2.Kameda Seika Co., Ltd..)

106 Analyses of endosperm starch from novel rice mutants accumulating high levels of amylose and resistant starch

☆Itoh, Y., N. Crofts, M. Abe, Y. Hosaka, S. Miura, N. Fujita (Grad. of Biores. Sci., Akita Pref. Univ.)

107 Development of low-calorie rice cultivars. 4.Characteristics of *ss3a/ ss4b* and *ss3a/ be2b* BC3F3 generation

○Kawamoto, T. ¹, S. Shibata ¹, K. Kato ¹, R. Takahashi ¹, N. Crofts ², S. Miura ², M. Abe ², N. Oitome ², N. Fujita ² (1.Akita Prefectural Agricultural Experiment Station, 2.Akita Prefectural University)

108 LC-MS analysis of 'Koumina' (amphidiploid between *Brassica rapa* and *Diploaxis tenuifolia*)

☆Yamaguchi, M. ¹, T. Suzuki ³, T. Ohnishi ², S. Bang ¹ (1.Fac.Agric.Utsunomiya U., 2.Utsunomiya Univ.,CERCC, 3.Center for Bioscience Research and Education, Utsunomiya Univresity)

109 Marker development to evaluate Citrus genetic resources in Ryukyu archipelago by using NGS

○Ishikawa, R. (Fac. Agri. And Life Sci., Hirosaki Univ.)

110 Breeding of a new rice cultivar "Konjikinokaze", and its eating quality

○Nakajo, S. ¹, T. Kodate ¹, Y. Ohta ¹, T. Fujioka ¹, A. Abe ², R. Terauchi ² (1.Iwate Agric. Res. Ctr, 2.Iwate Biotech. Res. Ctr.)

111 Development and future plan of tomato mutant population of 'Micro-Tom'

☆Hoshikawa, K. ¹, T. Ariizumi ¹, N. Fukuda ¹, Y. Kanayama ², Y. Kubo ³, K. Aoki ⁴, H. Ezura ¹ (1.Fac. Life Environ. Sci., Univ. Tsukuba, 2.Grad. Sch. Agri. Sci., Tohoku Univ, 3.Grad. Sch. Envi. Life Sci., Okayama Univ, 4.Grad. Sch. Lif. Envi. Sci., Osaka Pref. Univ)

112 Natural hybrid between *Vigna umbellata* and *Vigna minima*

Sano, H. ¹, ☆Y. Takahashi ², C. Muto ², S. Lay Heng ³, T. Channa ³, O. Makara ³, K. Morohashi ¹, K. Naito ², N. Tomooka ² (1.Department of Applied Biological Science, Tokyo University of Science, 2.Genetic Resources Center,NARO, 3.Cambodian Agricultural Research and Development Institute)

113 Varietal differences of heat stress tolerance in the seeds of varieties belong to Japan Rice Landrace Mini Core Collection under hot water disinfection method

☆Hadian, P.¹, K. Murata², M. Kashiwagi¹, T. Yamada¹, M. Kanekatsu¹

(1.Grad.Sch.of.Agr.Sci.Tokyo Uni.of Agr. and Tech., 2.Toyama Pref. Agr. Fores. Fish. Res. Cent.)

114 Varietal Difference in Heat-Stress Tolerance during Hot Water Disinfection of Rice Seeds in the “NIAS World Rice Core Collection”

☆Kashiwagi, M.¹, K. Murata², P. Hadian¹, T. Yamada¹, M. Kanekatsu¹ (1.Grad. Sch. of Agri. Sci. Tokyo Univ. of Agr. and Tech., 2.Toyama Pref. Agr. Fores. Fish. Res. Cent.)

115 Barley *Brachytic1* is orthologous to rice *D1*

○Honda, I., A. Ito, A. Yasuda, K. Yamaoka, M. Ueda, A. Nakayama (Maebashi Inst. Tech.)

116 Exploration and collection of wild wheat and wild safflower genetic resources in Armenia

○Sasanuma, T.¹, H. Nishida², O. Kovaleva³, I. Gabrielyan⁴, G. Melyan⁵, A. Avagyan⁵, A. Sahakyan⁵ (1.Fac. Agr., Yamagata Univ., 2.Grad. Sch. Environ. Life Sci., Okayama Univ., 3.VIR, 4.Inst. Bot., Natl. Acad. Sci. Armenia, 5.Sci. Center Agrobiotech., Agrarian Univ.)

117 Research of improving preharvest sprouting resistance in durum wheat cultivar ‘Setodure’

☆Kato, K., W. Funatsuki, M. Yanaka, Y. Ban, K. Takata (WARC, NARO)

118 Improvement of the earliness in Japanese bread wheat cultivars by backcrossing method using the early synthetic hexaploid lines

○Murai, K.¹, S. Takumi² (1.Dep. Biosci., Fukui Pref. Univ., 2.Grad. Sch. Agr. Sci., Kobe Univ.)

119 Agronomic traits and flour quality in near-isogenic winter wheat lines containing wheat yellow mosaic virus and eyespot resistance QTL

○Kasuya, M.¹, S. Ohnishi¹, T. Sonoda¹, Y. Yoshimura², T. Suzuki³, H. Jinno¹ (1.Kitami Agri.Exp.Stn.,HRO, 2.Central Agri.Exp.Stn.,HRO, 3.Hdqrs.,HRO)

120 Seed dormancy in wild emmer wheat: genetic variation not correlated to grain size dimorphism within spikelet

○Ohta, S., N. Uenomachi, S. Kakoya, A. Yamauchi, R. Kariyasu (Dep. Biosci., Fukui Pref. Univ.)

201 A proposal for high resolution phenotyping in soybean breeding field by drone images

☆Guo, W.¹, K. Noshita^{1,3}, M. Usui¹, A. Kaga², H. Iwata¹ (1.Grad. Sch. Agri. Sci., Univ. Tokyo, 2.NGRC, 3.JST PRESTO)

202 Comparison of several models for considering local environmental heterogeneity such as non-uniformity of a field

○Iwata, H.¹, M. Ishimori¹, K. Yamazaki¹, H. Kajiya-Kanegae¹, H. Takanashi¹, M. Fujimoto¹, J. Yoneda^{1,2}, T. Koshiba^{1,2}, A. Nagano³, M. Kobayashi⁴, K. Yano⁴, T. Sazuka⁵, T. Fujiwara¹, T. Tokunaga¹, N. Tsutsumi¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.EARTHNOTE Co., Ltd., 3.Fac. Agr., Ryukoku Univ., 4.Sch. of Agri., Meiji Univ., 5.Biosci. Biotech. Cent., Nagoya Univ.)

203 Establishment of analysis method for glucosinolates of cruciferous vegetables. 1. Simple extraction method and LC-MS setting condition

○Serizawa, H.¹, S. Yamazaki², H. Karasawa², T. Ozawa¹ (1.Nagano Pref.Veg.&Orn.Crop.Ex.St., 2.Nagano Pref.Ge.In.Tech.Ce.)

204 Small scale polishing test of sake rice using a new polishing machine

Kobayashi, A.¹, ☆F. Nakaoka¹, S. Kushiro², T. Ehara², K. Tomita¹ (1.Fukui Agr. Exp. Stn., 2.KETT ELECTRIC LABORATORY Co., Ltd.)

205 Molecular breeding of GABA high-accumulation tomato via CRISPR/Cas9

☆Nonaka, S.^{1,2}, C. Arai³, M. Takayama¹, C. Matsukura^{1,2}, H. Ezura^{1,2} (1.Faculty Life & Env. Sci., Univ. Tsukuba, 2.GRC, Univ. Tsukuba, 3.Grad. Sch. Life & Env. Sci., Univ. Tsukuba)

206 4D canopy analysis with UAV to sugar beet F1s over breeding research field

○Taguchi, K. ¹, W. Guo ², A. Itoh ¹, K. Okazaki ¹, Y. Kuroda ¹, H. Matsuhiro ¹, S. Ueda ¹, S. Ninomiya ², M. Hirafuji ¹ (1.NARO Hokkaido Agric. Res. Cent., 2.University of Tokyo)

207 Development of genetic engineering technology for Sorghum bicolor

☆Izawa-Sato, K., K. Tokue, T. Ariizumi, H. Ezura (Gene Research Center, Faculty of Life and Environmental Sciences, University of Tsukuba)

208 Simple method to detect the seed dormancy marker in barley

☆Okada, K. ¹, T. Kato ¹, K. Sato ², S. Nakamura ³, K. Namai ¹ (1.Tochigi Prefectural Agricultural Experiment St., 2.Okayama University, 3.NARO)

209 Selection of higher yield rice mutant lines by gamma ray irradiation

☆Kato, H. (NARO, Institute of Crop Science, Radiation Breeding Division)

210 Estimation of processing suitability for tofu by protein and sucrose-content

○Kobayashi, S., N. Yamaguchi (Tokachi Agr. Exp. Sta., HRO)

211 Studies on easy cracking property of buff-pigmented soybean seed coat

○Senda, M. ¹, N. Yamaguchi ², M. Hiraoka ¹, S. Kawada ¹, R. Iiyoshi ¹, K. Yamashita ¹, T. Sonoki ¹, H. Maeda ¹, M. Kawasaki ¹ (1.Fac. Agric. Life Sci., Univ. Hirosaki, 2.Tokachi Agr. Exp. Sta., HRO)

212 Canceled

213 Screening and Evaluation of High Dietary Fiber Mutants in Rice Seeds

☆Idesawa, Y., R. Tanimoto, M. Oyamada, I. Komiya, M. Nisimura (Faculty of Agriculture, Niigata University)

214 Completion of Koshihikari and Hitomebore Library with Various Amylose contents from their mutants

☆Tanimoto, R., Y. Idesawa, M. Oyamada, I. Komiya, M. Nisimura (Faculty of Agriculture, Niigata University)

215 Characteristics of glutinous rice lines pyramiding two amylopectin mutations containing a lack of starch branching enzyme I

☆Kawamata, K., Y. Fukazawa, S. Higuchi, K. Okamoto (Plant Biotech. Inst., IBARAKI Agri. Cent)

216 Starch properties and taste evaluation of rice cultivar, 'Akitakomachi', grown under high temperature

○Kato, K. ¹, Y. Hosaka ², t. Kawamoto ¹, S. Shibata ¹, R. Takahashi ¹, N. Fujita ² (1.Agric.Exp.Sta.Akita Pref., 2.Fucl. Biores. Sci. Akita Pref. Univ.)

217 Possible selection for high yield lines by measuring canopy temperature in a wheat breeding program

○Ohnishi, S., M. Kasuya, T. Sonoda, H. Jinno (Kitami A.E.S., HRO)

218 Validation of QTLs for protein content of brown rice derived from cultivar, 'Koshihikari'

○Wada, T. ¹, T. Kumamaru ², K. Miyahara ¹, M. Miyazaki ^{1,3}, K. Shimomura ¹ (1.Fukuoka Agric. Forest. Res. Cent., 2.Facult. Agri., Kyushu Univ., 3.Fukuoka Pref. Office)

219 Genome-wide association study for eating quality traits of cooked rice grains in Japanese rice germplasm

○Hori, K. ¹, J. Yonemaru ¹, K. Suzuki ¹, K. Iijima ¹, Y. Tsujii ², I. Omata ², S. Niki ², K. Kimura ², K. Shu ¹, M. Yamasaki ³, K. Ebana ⁴, K. Takano ² (1.NICS, 2.Tokyo Univ. Agric., 3.Kobe Univ., 4.NGRC)

220 Genetic analysis of a large grain mutant found in transposon-tagged lines in rice

☆Chiou, W. ¹, K. Rikiishi ², E. Himi ², H. Nishimura ², K. Tsugane ³, M. Maekawa ² (1.Grad. Sch. Environ. Life Sci., Okayama Univ., 2.Institute of Plant Science and Resources, Okayama Univ., 3.National Institute for Basic Biology)

221 Screening of QTLs for grain size using extra-large grain rice

☆Miura, K. ¹, S. Segami ^{1,2}, T. Yamamoto ¹, K. Takehara ¹, S. Kido ¹, Y. Iwasaki ¹ (1.Faculty of Bioscience, Fukui Prefectural University, 2.Res. Inst. Env. Agr. Fish. Osaka)

301 Detecting QTL for soybean downy mildew resistance

○Taguchi-Shiobara, F.¹, K. Fujii¹, T. Sayama¹, S. Kato², A. Kikuchi², M. Iwahashi³, C. Ikeda³, K. Kosuge^{3,4}, K. Okano³, M. Hayasaka⁵, Y. Tsubokura⁵, M. Ishimoto¹
(1.NICS/NARO, 2.TARC/NARO, 3.Ibaraki Agriculture Center, 4.Ibaraki Rokko Agricultural and Forestry Management Office, 5.Snow Brand Seed Co., Ltd.)

302 Detection of QTL for seed germination and coleoptile elongation under anaerobic conditions in Lowland NERICAs

☆Kuya, N.¹, J. Sun², K. Iijima¹, N. Kanno¹, J. Yonemaru¹, T. Yamamoto¹ (1.NARO, Institute of Crop Science, 2.Shenyang Agricultural University)

303 QTL Mapping of Male Sterility in Population Derived from Progeny of Satsuma

☆Goto, S., T. Yoshioka, S. Ohta, M. Kita, H. Hamada, T. Shimizu (Institute of Fruit Tree and Tea Science, NARO)

304 Fine mapping of QTLs for root length on chromosomes 2 and 6 in rice

☆Kitomi, Y.^{1,2}, E. Nakao³, S. Kawai¹, N. Kanno¹, T. Ando¹, S. Fukuoka¹, K. Irie³, Y. Uga¹ (1.Inst. Crop Sci., NARO, 2.Grad. Sch. Agric. Life Sci., U. Tokyo, 3.Dep. Int. Agric. Dev., Tokyo U. Agric.)

305 Identification of candidate gene related to rice regeneration using GWAS

☆Yano, K.¹, A. Nishimura¹, E. Koketsu², K. Hirano², H. Kitano², M. Matsuoka²
(1.Graduate School of Agricultural and Life Sciences, The University of Tokyo,
2.Bioscience and Biotechnology Ctr., Nagoya U.)

306 Analyses of regeneration related genes in rice

☆Nishimura, A.¹, T. Takashi², S. Lin³, T. Yamamoto⁴, M. Ashikari⁵, E. Koketsu⁵, K. Yano¹, N. Tsutsumi¹, M. Matsuoka⁵ (1.Grad. Sch. Agr.Life Sci., Univ. Tokyo,
2.StayGreen. Co., Ltd., 3.Chiese Academy of Sciences, 4.Institute of Crop Science, NARO,
5.Biosci. Biothech. Center, Nagoya Univ.)

307 Fine-mapping pod softening factor in yardlong bean, *Vigna unguiculata* (L.) Walp. ssp. *unguiculata* cv.-gr. *sesquipedalis*

☆Kobayashi, Y.¹, Y. Takahashi², K. Alisa³, H. Sakai⁴, T. Muto², P. Somta³, N. Tomooka², K. Naito² (1.Grad. Sch. Frontier Sci., Univ. Tokyo, 2.Genetic Resources Center, NARO, 3.Kasetsart Univ., 4.Advanced Analysis Center, NARO)

308 QTL analysis of ultra-late bolting in wild lettuce using RAD-seq

○Seki, K. (Nagano Veg. & Ornam. Crops Exp. Stn.)

309 The JAPAN-MAGIC, multi-parent advanced generation inter-cross population derived from eight high-yield rice cultivars and its haplotype analysis

○Yonemaru, J.¹, D. Ogawa¹, E. Yamamoto^{1,2}, T. Ootani¹, N. Kanno¹, H. Tsunematsu¹, Y. Nonouye¹, M. Yano¹, T. Yamamoto¹ (1.NARO, Institute of Crop Science, 2.NARO, Institute of Vegetable and Floriculture Science)

310 The advantage of genomic selection with “haplotype” information in apple breeding

○Kunihisa, M.¹, S. Moriya¹, K. Abe¹, T. Hayashi², H. Iwata³, K. Noshita³, M. Minamikawa³, Y. Katayose², C. Nishitani¹, S. Terakami¹, T. Yamamoto¹ (1.NIFTS, NARO, 2.NICS, NARO, 3.Grad. Sch. Agr. Life Sci., Univ. Tokyo)

311 Development of high polymorphic markers among wheat breeding materials in Japan

○Ishikawa, G.¹, T. Tanaka^{1,2}, M. Saito³, Y. Katayose¹, H. Kanamori¹, S. Mori¹, H. Sasaki¹, K. Kurita¹, F. Kobayashi¹, H. Handa¹, T. Nakamura³ (1.Inst. of Crop Sci., NARO, 2.Advanced Analysis Cent., NARO, 3.Tohoku Agri. Res. Cent., NARO)

312 Epigenomic Diversity in a Global Collection of *Arabidopsis thaliana* Accessions

○Kawakatsu, T.^{1,2} (1.NIAS, 2.Salk Institute for Biological Studies)

313 Draft genome sequence of horsegram (*Macrotyloma uniflorum*)

Hirakawa, H.¹, C. Rakesh², K. Shirasawa¹, S. Nagano¹, H. Nagasaki¹, S. Tilak², ○S. Isobe¹ (1.Kazusa DNA Research Institute, 2.CSK Himachal Pradesh Agricultural University)

314 The phased pseudomolecule in alloecotoploid strawberry suggesting the probable ancestral genomes

○Shirasawa, K.¹, H. Hirakawa¹, M. Terachi², S. Nagano¹, H. Nagasaki¹, F. Maeda³, T. Yanagi², S. Isobe¹ (1.Kazusa DNA Res. Inst., 2.Fac. Agric., Kagawa U, 3.Chiba Pref. Agric. Forest. Res. Center)

315 Whole Genome Sequencing of Wild and Cultivated Sweetpotato Species

☆Nagasaki, H. ¹, U. Yoon ², Q. Cao ³, K. Shirasawa ¹, Q. Liu ⁴, J. Jeong ⁵, M. Tanaka ⁶, H. Hirakawa ¹, H. Zhai ⁴, Y. Okada ⁶, J. Hahn ², S. Kwak ⁵, D. Ma ³, S. Isobe ¹ (1.Kazusa DNA Res. Inst., 2.NIAS, RDA, 3.SPRI, CAAS, 4.China Agri. Univ., 5.KRIBB, 6.NARO)

316 Effects of the earliness *per se* QTL, *qEpse3* on flowering time in tetraploid wheat

☆Saito, T., K. Nishimura, H. Saito, A. Kitajima, T. Nakazaki (Grad. Sch. Agr., Kyoto Univ.)

317 QTL analysis of traits morphology in *Cucurbita moschata* 'Shishigatani'

☆Hashimoto, T. ¹, N. Kubo ^{1,2}, A. Nagano ³, A. Sasaki ¹, Y. Nakamura ^{1,4}, Y. Mimura ⁴ (1.Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., 2.Biotechnol. Res. Dept., Kyoto Pref. Agric. Forest. Fish. Technol. Cent. (KPAFFTC), 3.Fac. Agr., Ryukoku Univ., 4.Hortic. Div., Agric. Forest. Technol. Dept., KPAFFTC)

318 Breeding of a new sorghum cultivar "Enryu" with high biomass and sucrose yields for biorefinery

○Sazuka, T. ¹, A. Fujii ¹, S. Araki-Nakamura ¹, T. Wada ², M. Yamaguchi ², S. Okamura ², K. Ohmae-Shinohara ¹, Y. Ito ¹, M. Matsuoka ¹, H. Kitano ¹, S. Kasuga ³ (1.Biosci. and Biotech. Center, Nagoya Univ., 2.Grad. Sch. Bioagri. Sci, Nagoya Univ., 3.Fac. Agri., Shinshu Univ.)

319 GWAS for panicle traits in rice

☆Kotake, K. ¹, K. Yano ², K. Hirano ¹, H. Kitano ¹, M. Matsuoka ¹ (1.Bioscience and Biotechnology Ctr., Nagoya U., 2.Graduate School of Agricultural and Life Sciences, The University of Tokyo)

320 Organelle genome structures of a progeny of cybrid kosena-cms *Brassica napus*

○Arimura, S. ¹, S. Yanase ¹, Y. Watari ¹, N. Tsutsumi ¹, N. Koizuka ² (1.The University of Tokyo, Graduate School of Agricultural and Life Sciences, 2.Tamagawa University, College of Agriculture Department of Bioresource Science)

321 Genetic analysis for low tillering from *Oryza meridionalis*

☆Inoue, S. ¹, Y. Yamagata ², S. Zheng ¹, D. Fujita ¹ (1.Saga Univ., 2.Kyushu Univ.)

401 New tools of Plant Genome DataBase Japan (PGDBj) in 2017

☆Ichihara, H.¹, T. Shibaya¹, T. Tamura², S. Shirasawa¹, A. Nakaya³, E. Asamizu⁴, Y. Nakamura¹, H. Hirakawa¹, S. Tabata¹ (1.Kazusa DNA Res. Inst., 2.LINE Co., Ltd., 3.Grad. Sch. Med., Osaka Univ., 4.Fac. Agric., Ryukoku Univ.)

402 DNA markers and QTLs search in Plant Genome Database Japan (PGDBj)

☆Shibaya, T.¹, H. Ichihara¹, T. Tamura², S. Shirasawa¹, E. Asamizu³, H. Hirakawa¹, S. Tabata¹ (1.Kazusa DNA Res. Inst., 2.LINE Co., Ltd., 3.Fac. Agric., Ryukoku Univ.)

403 A gene nomenclature for the Triticeae tribe

○Ikeda, T.¹, J. Rogers², C. Morris³, C. Guzman⁴, M. Spannagl⁵, H. Gundlach⁶, S. Twardziok⁶, T. Lux⁶, P. Kersey⁷, T. Lettelier⁸, B. Santos⁹, M. Caccamo⁹ (1.NARO, Western Agricultural Research Center, 2.CONICET, Argentina, 3.USDA, USA, 4.CIMMYT, Mexico, 5.PGSB, Germany, 6.PGSB, Germany, 7.EBI, UK, 8.INRA, France, 9.NIAB, UK)

404 The investigation of a causal relationship between rice productivity and cultivation environment

☆Nishiuchi, S.^{1,2} (1.Grad. Sch. Bioagri., Nagoya U., 2.PRESTO JST)

405 Investigation of immune response against *Fusarium oxysporum* infection in Chinese cabbage by transcriptome analysis

☆Miyaji, N.¹, M. Shimizu², S. Takada¹, M. Kaji³, T. Takasaki-Yasuda¹, K. Okazaki⁴, R. Fujimoto¹ (1.Grad. Sch. Agr., Univ. Kobe, 2.Iwate Biotech. Res. Cent., 3.Watanabe Seed Co., Ltd., 4.Grad. Sch. Sci., Univ. Niigata)

406 Identification of mutations induced by gamma ray irradiation by exome sequencing and rapid mapping causal genes in rice

☆Li, F.¹, S. Niwa¹, N. Nishimura¹, H. Ichida², R. Morita², T. Abe², H. Kato¹ (1.Rad. Breed. Div., Inst. Crop Sci., NARO, 2.Nishina Cent., RIKEN)

407 Comparative study on expression of flowering-related genes by RNA-Seq in a wheat breeding line "Chogokuwase" and its progenitor lines

○Nishida, H.¹, H. Masuda¹, N. Mizuno², S. Nasuda², M. Fujita³, K. Kato¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.Grad. Sch. Agr., Kyoto U., 3.NICS)

408 Effect of deletions at upstream site of *Vrn-A3* on expression level of *Vrn3* in tetraploid wheat

☆Nishimura, K., T. Saito, H. Saito, A. Kitajima, T. Nakazaki (Grad. Sch. Agr., Kyoto Univ.)

409 *KORPOKKUR* gene is essential for proper cell division and vegetative phase change in rice

○Satoh-Nagasawa, N. ¹, N. Nagasawa ¹, Y. Nagato ², Y. El Mannai ¹, H. Wabiko ¹ (1.Fac. Biores. Sci., Akita Pref. U., 2.Grad. Sch. of Agric. Life Sci., U. Tokyo)

410 *DDR1* regulates development and disease resistance in rice

○Yoshida, H. ¹, Y. Matsumura ², K. Mori ², T. Yamamoto ², T. Nakajima ², F. Lombardo ¹, T. Akiyama ³, M. Kawata ¹ (1.Inst Agrobiological Sci, NARO, 2.CARC, NARO, 3.Inst Crop Sci, NARO)

411 Characterization of specific α -gliadin suppressor in Chinese Spring wheat

Suzuki, S., Y. Kamei, M. Miura, Y. Ogihara, ○K. Kawaura (KIBR, Yokohama City Univ.)

412 Accumulation of protein complex of CMS-associated protein preSATP6 under the semi-dominant allele of *Restorer-of-fertility 1* in sugar beet

☆Arakawa, T., S. Ue, H. Kagami, Y. Yoshida, T. Kubo (Grad. Sch. Sci., Univ. Hokkaido)

413 Development of transient gene expression system and plant induction procedure using isolated zygote

☆Toda, E. ^{1,2}, N. Koiso ², M. Tunashima ³, N. Kato ^{1,2,3}, T. Okamoto ^{1,2} (1.RInC, RIKEN, 2.Dept of Biol Sci., Tokyo Metropolitan Univ., 3.Plant Innovation Center, Japan Tobacco Inc.)

414 Identification of a cis-acting element conferring tepal-specific gene expression in Lily

☆Ando, T. ¹, M. Mizutori ², A. Maruyama ¹, T. Wakasugi ¹, K. Shoji ³, M. Yamamoto ¹ (1.Grad. Sch. Sci. Eng, Univ. Toyama, 2.Fac. Sci., Univ. Toyama, 3.Toyama Pref. Agri. Forest. Fish. Res. Ctr.)

415 Elucidation of the epigenetic regulation mechanism of flowering promoter gene *VRN1* using cytoplasmic substitution wheat line

Umekita, K. ¹, ☆T. Kuwabara ¹, K. Narita ¹, K. Nagaki ², M. Murata ², K. Murai ¹ (1.Dep. Biosci., Fukui Pref. Univ., 2.IPSR, Okayama Univ.)

416 Phenotypic analysis of early flowering epigenetic mutant in *Arabidopsis thaliana*

☆Takada, S. ¹, S. Ishikura ¹, E. Itabashi ², N. Miyaji ¹, M. Shimizu ³, T. Takasaki-Yasuda ¹, R. Fujimoto ¹ (1.Grad. Sch. Agr. Sci., Univ. Kobe, 2.Inst. Vegetable and Floriculture Sci., NARO, 3.IBRC)

417 Development of a new transformation vector that is autonomously replicable in the chloroplast

☆Uemura, K., K. Kojima, T. Terachi (Fac. Life Sci., Kyoto Sangyo U.)

418 Characterization of a rice endogenous transposon and its utilization in genome editing

Hirasawa, T. ¹, T. Kugo ¹, Y. Yukawa ¹, S. Nogawa ¹, H. Numa ², T. Nishimura ¹, ○Y. Habu ³ (1.Bioengineer., Nagaoka Univ. Tech., 2.NAAC, NARO, 3.NIAS, NARO)

419 CRISPR/Cas9 mediated gene targeting system in rice

○Endo, M. ¹, S. Toki ^{1,2} (1.NIAS, NARO, 2.Kihara Inst. Biological Res., Yokohama City Univ.)

420 Multi-loci targeted mutagenesis CRISPR/Cpf1 in rice

☆Mikami, M. ^{1,2}, A. Endo ², H. Kaya ², M. Endo ², S. Toki ^{1,2,3} (1.Gra. Sch. Nanobiol., Yokohama City Univ., 2.Inst. Agrobio. Sci., NARO, 3.Kihara. Inst. Biol. Res., Yokohama City Univ.)

421 Development of genome-editing method using multi-copy transgene in higher polyploidy and vegetative-propagated plant, which lacks whole genome information

☆Kishi-Kaboshi, M., R. Aida, K. Sasaki (NIVFS, NARO)

501 Florigen distribution and a memory for day length information

○Tsuji, H. ¹, A. Fujita ², A. Matsumoto ², N. Saihara ¹ (1.Kihara Inst. Biol. Res., Yokohama City Univ., 2.Grad. Sch. Biol. Sci., Nara Inst. Sci. Technol.)

502 Role of soybean florigen genes – *FT2a* and *FT5a*– in the control of pod setting

☆Takeshima, R. ¹, K. Harigai ¹, J. Zhu ¹, F. Kong ², T. Yamada ¹, J. Abe ¹ (1.Grad. Sch. Agric., Hokkaido U., 2.Chinese Academy of Sciences)

503 Is the male-specific gene *AoMYB35* involved in sex determination in *Asparagus officinalis*?

☆Tsugama, D., K. Matsuyama, M. Ide, K. Fujino, K. Masuda (Dept. Agr., Hokkaido Univ.)

504 Control of negative gravitropic growth of rhizome in wild rice by sugars

☆Bessho-Uehara, K., N. Jovano, M. Ashikari (The Bioscience and Biotechnology centor)

505 A 14-rowed barley mutant of spontaneous origin and its genetic analyses

○Taketa, S. ¹, K. Okubo ² (1.Institute of Plant Science and Genetic Resources, 2.Okayama Prefectural Research Institute for Agriculture)

506 Compensation growth of lateral root responding to excision of seminal root tip in rice

☆Kawai, T. ¹, M. Nosaka-Takahashi ², A. Yamauchi ¹, Y. Inukai ^{2,3} (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.ICCAE, Nagoya U., 3.PREST, JST)

507 Gene interaction at seed-awning loci in the genetic background of wild rice

Ikemoto, M., M. Otsuka, P. Thanh, P. Phan, R. Ishikawa, ○T. Ishii (Grad. Sch. Agr. Sci., Kobe Univ.)

508 Effects of the cytoplasm from a relative species *Aegilops mutica* on the agronomic characters in Japanese bread wheat cultivars

☆Matsumura, M., K. Murai (Dep. Biosci., Fukui Pref. Univ.)

509 Isolation and functional analysis of the rice stay-green gene DCD1

☆Yamatani, H. ¹, K. Kohzuma ^{1,2}, M. Nakano ¹, Y. Hayashi ³, T. Takami ⁴, Y. Monden ⁵, Y. Okumoto ⁶, W. Sakamoto ^{2,4}, T. Abe ³, M. Kusaba ^{1,2} (1.Grad. Sch. Sci., Hiroshima Univ, 2.CRSET, 3.RIKEN, Nisina Cent, 4.Inst. Plant Sci. Res., Okayama Univ, 5.Grad. Sch. Env and Life Sci., Okayama Univ, 6.Grad. Sch. Agri., Kyoto Univ)

510 Fine mapping of *FLT2*, a heading time gene in rice

○Ichitani, K.¹, R. Hoki¹, M. Uemura¹, S. Taura², Y. Yoshistu³, K. Hatakeyama³
(1.Fac. Agr., Kagoshima Univ., 2.Inst. Gene Res., Kagoshima Univ., 3.Fac. Agr., Iwate
Univ.)

511 Production and classification of *Diplotaxis tenuifolia*-*Brassica oleracea* monosomic
addition line

☆Nagashima, Y.¹, T. Ohnishi², S. Bang¹ (1.Fac. Agric., Utsunomiya Univ.,
2.Utsunomiya Univ., CERCC)

512 Investigation of physiological and morphological characteristics in *Brassica rapa*
carrying *Sinapis turgida* cytoplasm

☆Sunaga, K.¹, M. Yokotsuka¹, Y. Fujita¹, T. Ohnishi², H. Sekimoto¹, S. Bang¹ (1.Fac.
Agric., Utsunomiya Univ., 2.Utsunomiya Univ., CERCC)

513 Genome-wide analyses of meiotic siRNAs produced specifically in anther tapetum of
rice

☆Ono, S.¹, H. Liu¹, K. Tsuda^{1,2}, E. Fukai³, K. Tanaka⁴, T. Sasaki⁵, K. Nonomura^{1,2}
(1.Exp. Farm, Natl. Inst. Genet., 2.Dep. Life Sci., Grad. U. Adv. Study/SOKENDAI, 3.Fac.
Agr., Niigata Univ., 4.NODAI Genome Res. Ctr., Tokyo Univ. Agr., 5.NODAI Res. Inst.,
Tokyo Univ. Agr.)

514 Isolation of *SLF* (*S*-locus *F*-box) genes and analysis of a pollen-part self-compatible
mutant of *Solanum arcanum*

☆Chino, F.¹, M. Koito¹, Y. Mouri¹, M. Minamikawa^{1,3}, K. Kondo^{2,4}, Y. Kowyama², H.
Sassa¹ (1.Grad. Sch. Hort., Chiba Univ., 2.Fac. Biores., Mie Univ., 3.Grad. Sch. Agric. Life
Sci., U.Tokyo, 4.JIRCAS)

515 Isolation of novel *SFBB* genes and analysis of a Japanese pear cultivar 'Natsuhikari'
with weak self-incompatibility

☆Saito, N., H. Sassa (Grad. Sch. Hort., Chiba Univ.)

516 Quantitative evaluation method for liquid pollen culture

☆Ogawa, Y., H. Sassa (Grad. Sch. Hort., Chiba Univ.)

517 Genetic analysis of partial sterility found in the progeny from the cross between *Oryza sativa* and *O. meridionalis*

☆Uemura, M. ¹, R. Hoki ¹, T. Nishiobino ¹, S. Taura ², T. Sato ³, R. Ishikawa ⁴, K. Ichitani ¹ (1.Fac. Agr., Kagoshima Univ., 2.Inst. Gene Res., Kagoshima Univ., 3.Grad. Sch. Agri. Sci., Tohoku Univ., 4.Fac. Agri. and Life Sci., Hirosaki Univ.)

518 Cloning of *S22A* for F ₁ pollen sterility in hybrid between *Oryza sativa* and *O. glumaepatula*

☆Yamagata, Y., H. Yasui, A. Yoshimura (Fac. Agr., Kyushu Univ.)

519 Distribution of mitochondrial *orf108* in *Sinapis*

☆Jikuya, M. ¹, T. Terachi ², H. Yamagishi ² (1.Grad. Sch. Life Sci., Kyoto Sangyo U., 2.Fac. Life Sci., Kyoto Sangyo U.)

520 Development of a new culture system towards efficient production of wheat transformants

☆Tsujimura, M. ¹, Y. Nakamura ², T. Terachi ³ (1.Kyoto Sangyo U. Plant Organelle Genomics R.C., 2.Grad. Sch. Life Sci., Kyoto Sangyo U., 3.Fac. Life Sci., Kyoto Sangyo U.)

521 Constructing a contig of *HWA2*, which is the causal gene of a hybrid weakness in rice using PacBio-sequencer reads

Suzuki, Y. ¹, K. Ichitani ², N. Watanabe ¹, ○T. Kuboyama ¹ (1.Col. Agr., Ibaraki Univ., 2.Fac. Agr., Kagoshima Univ.)

601 Beyond root depth: Diversity of water transferability of root in the genus *Vigna*

○Naito, K. ¹, K. Iseki ², N. Tomooka ¹ (1.NARO Genetic Resources Center, 2.JIRCAS)

602 Analyses of heat stress response in *Arabidopsis* lacking CNGC2 during seedling and reproductive stages

☆Katano, K., N. Suzuki (Sophia University)

603 Genetic diversity and nature of gene actions controlling root length under early stage water stress in wheat

☆Tamir, H.¹, G. Yan², H. Liu² (1.National Institute of Crop Science (NICS), NARO, 2.School of Plant Biology, The University of Western Australia)

604 Genetic analysis of panicle number in rice using unfertilized paddy field

☆Fujita, F.¹, Y. Hashimoto³, M. Yamasaki², A. Shimizu¹ (1.Grad. Sch. Environ. Sci., Univ. Shiga Pref., 2.Food Resources Education and Res. Ctr., Grad. Sch. Agric. Sci., Kobe Univ, 3.Environ. Sci., Univ. Shiga Pref.)

605 ABA regulates a formation of barrier to radial oxygen loss in rice

○Shiono, K.¹, M. Yoshikawa¹, S. Yamada¹, R. Hashizaki¹, K. Ogata², T. Yamamoto², Y. Hojo³, T. Matsuura³, I. Mori³, S. Taira¹, T. Yoshioka¹ (1.Depot. Biosci. Biotech., Fukui Pref. Univ., 2.Shimadzu Corporation, 3.Inst. Plant Sci. Resour, Okayama Univ.)

606 QTL analysis for field resistance to brown spot in the Indica rice cultivar 'CH45'

Matsumoto, K.¹, ☆Y. Ota¹, S. Seta¹, Y. Nakayama¹, T. Ohno¹, H. Sato² (1.Mie Pref. Agri. Res. Inst., 2.NARO)

607 Identification of allelic genes in the *Stvb* locus corresponding to rice stripe resistance

○Hayano-Saito, Y.¹, Y. Kawahara², H. Maeda¹, K. Hayashi¹ (1.NARO Central Region Agricultural Research Center, 2.NARO Institute of Crop Science)

608 The Effects of the Novel Resistance Genes to Common Cutworm (*Spodoptera litura* Fabricius) in Soybean Near-isogenic Lines

☆Oki, N.¹, A. Kaga², T. Shimizu³, H. Yano⁴, M. Ishimoto³, K. Takagi⁵, M. Takahashi¹, Y. Kono⁶, M. Takahashi³ (1.NARO, KARC, 2.NARO, NGRC, 3.NARO, NICS, 4.NARO, WARC, 5.NARO, TARC, 6.NARO, CARC)

609 Variation of yellowish leaves caused by beet western yellows virus in sugar beet

○Kuroda, Y., K. Takashino, S. Ueda, K. Okazaki, K. Taguchi (Hokkaido Agricultural Research Center, NARO)

610 Exploration of resistance to the green rice leafhopper (*Nephotettix cincticeps* Uhler) in a core collection of landraces in rice (*Oryza sativa* L.)

Poster presentations

P001 Triple knock-in and knock out of rice flowering genes in order to monitor the florigen function *in-vivo*

☆Ueke, Y. ¹, M. Suzuki ¹, H. Tsuji ^{2,3}, K. Taoka ^{2,3}, K. Shimamoto ², R. Terada ¹, Z. Shimatani ^{1,2} (1.Meijo Univ., 2.NAIST Bio., 3.YCU KIBR)

P002 Gene editing with self-marker free for fungus-resistant rice

☆Suzuki, M. ¹, Y. Ueke ¹, Y. Kawano ^{2,3}, K. Shimamoto ², M. Arakawa ¹, R. Terada ¹, Z. Shimatani ^{1,2} (1.Meijo Univ, 2.NAIST Bio, 3.CAS PSC)

P003 Development and characterization of JAPAN-MAGIC population derived from eight Japanese cultivars with high yield

☆Ogawa, D. ¹, E. Yamamoto ², T. Ootani ¹, N. Kanno ¹, H. Tsunematsu ¹, Y. Nonoue ¹, M. Yano ¹, T. Yamamoto ¹, J. Yonemaru ¹ (1.NARO, Institute of Crop Science, 2.NARO, Institute of Vegetable and Floriculture Science)

P004 Comparison of accuracy of genomic prediction models based on genome-wide or 12 yield-related gene SNPs

☆Kajiya-Kanegae, H. ¹, K. Hori ², T. Kataoka ³, J. Tanaka ², H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., U. Tokyo, 2.Institute of Crop Science, NARO, 3.Kyushu Okinawa Agri. Res. Cent., NARO)

P005 Effective seed production system of near isogenic rice varieties using the susceptible gene to the 4-HPPD inhibitory herbicide

Murata, K. ¹, ○H. Maeda ², M. Kuroki ³, H. Kato ³, K. Sekino ⁴, A. Yamazaki ⁴, Y. Yamada ⁴, M. Kawata ⁵, H. Yoshida ⁵, S. Hirose ⁵, M. Kawagishi-Kobayashi ⁵, Y. Taniguchi ⁵, Y. Tozawa ⁶, M. Ohshima ⁴ (1.Toyama Prefectural Agricultural, Forestry and Fisheries Research Cente, 2.Central Region Agricultural Research Center, NARO, 3.Institute of Crop Science, NARO, 4.SDS Biotech K.K., 5.Institute of Agrobiological Sciences, NARO, 6.Graduate School of Science and Engineering, Saitama Univ.)

P006 Root distribution of local rice varieties in Hokkaido by a simplified evaluation method

☆Doman, K., T. Nishimura, H. Kiuchi, Y. Hirayama, T. Sato (Kamikawa Agri.Exp.Stn.,HRO)

P007 A method for predicting the proportion of the progeny exceeding a threshold level

☆Tanaka, R., H. Iwata (Grad. Ach. Agric. Life Sci., Univ.Tokyo)

P008 Under what conditions should we use multi-environment and multi-trait genomic prediction? : A theoretical consideration

☆Hori, T., H. Iwata (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

P009 Decision of early selection indexes for breeding of low acrylamide chip-processing varieties

☆Nishinaka, M. ¹, C. Matsuura-Endo ², S. Takigawa ², S. Tamiya ² (1.Institute of Crop Science, NARO, 2.Hokkaido Agricultural Research Center, NARO)

P010 Time-series plant growth measured by UAV remote sensing and its association with genome-wide polymorphisms

☆Watanabe, K. ¹, H. Kajiya-Kanegae ¹, M. Maeda ², M. Suehiro ², W. Yokoyama ², K. Ebana ³, M. Yamasaki ², H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe Univ., 3.Genetic Resources Center, NARO)

P011 An investigation on structural equation models able to remove the influence of confounding factors for inference of causality between traits

○Onogi, A. ^{1,2}, H. Iwata ² (1.JST PRESTO, 2.Grad. Sch. Agric. Life Sci., Univ. Tokyo)

P012 Characteristics extraction by image analysis using backcross inbred line between Koshihikari and Kasalath in rice

Kawada, R. ¹, T. Okamoto ¹, N. Kutsuna ², ○S. Sugita Konishi ¹ (1.Kagawa University, 2.Graduate School of Frontier Sciences, The University of Tokyo)

P013 Genetic variation of heading date in rice germplasm under different environment conditions

○Fukuta, Y.¹, S. Yanagihara², M. Obara², T. Takai², A. Tomita³ (1.TARF,JIRCAS, 2.JIRCAS, 3.University of Tsukuba)

P014 The latest negotiating movement on ABS (Access and Benefit Sharing)

○Yamamoto, A., S. Yamamoto (Genetic Resources Center, NARO)

P015 Temporal differences of anatomical characteristics of root thickening in radish cultivars

☆Otsubo, K.¹, W. Azuma³, K. Kuroda¹, Y. Yoshida² (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.Food Resources Education and Research Center, Grad. Sch. Agr. Sci. Kobe Univ., 3.FSERC, Kyoto Univ.)

P016 Analysis of mutations in the genes related to starch biosynthesis in sweetpotato

○Tanaka, M.¹, K. Katayama², Y. Monden³, S. Isobe⁴, Y. Kai¹ (1.Kyushu Okinawa Agr. Res. Ctr., NARO, 2.Inst. Crop Sci., NARO, 3.Grad. Sch. Env. Life Sci., Univ. Okayama, 4.Kazusa DNA Res. Inst.)

P017 Breeding of late maturing new rice cultivar "Shinnosuke" with excellent eating quality and strong tolerance to high-temperature during ripening period

○Kasaneyama, H.¹, N. Hashimoto¹, T. Kanbe¹, T. Ishibashi¹, K. Ishizaki¹, K. Kobayashi², S. Kaneda³, T. Matsui³, K. Nabata⁴, E. Nara² (1.Niigata Crop Res. Center, 2.Niigata Agr. Junior College, 3.Sado. Agr. Ext., 4.Shibata. Agr. Ext. Cen.)

P018 Use of *gw2* mutant to rice breeding

☆Yamamoto, T., K. Takehara, S. Kido, K. Murai, Y. Iwasaki, K. Miura (Dept. Biosci. Fukui Pref. Univ)

P019 Classification of tea (*Camellia sinensis*) cultivars and landraces in Kyoto Prefecture and other regions based on SSR and RAD markers

○Kubo, N.^{1,2}, Y. Mimura^{3,4}, T. Matsuda³, A. Nagano⁵, N. Hirai⁶, H. Yoshida⁷, N. Uemura⁸, T. Fujii^{2,9} (1.Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., 2.Biotechnol. Res. Dept., Kyoto Pref. Agric. Forest. Fish. Technol. Cent. (KPAFFTC), 3.Tea Indust. Res. Div., Agric. Forest. Technol. Dept., KPAFFTC, 4.Present address: Hortic. Div., Agric. Forest. Technol. Dept., KPAFFTC, 5.Fac. Agr., Ryukoku Univ., 6.Grad. Sch. Agr., Kyoto Univ., 7.Kyoto Pref. Kizu High Sch., 8.Fukujuen Co., Ltd., 9.Present address: Fac. Bioenviron. Sci., Kyoto Gakuen Univ.)

P020 Breeding of a new red skin potato cultivar “Akanekaze” with good eating quality and disease resistance

○Asano, K.¹, A. Kobayashi^{1,2}, S. Tsuda¹, S. Tamiya¹, M. Nishinaka^{1,3}, M. Mori¹, A. Takada^{1,4}, N. Mukojima^{1,5}, T. Narabu¹, T. Maoka¹ (1.NARO Hokkaido Agric. Res. Cent., 2.NARO Kyushu Agric. Res. Cent., 3.NARO Inst. of Crop Sci, 4.NARO Headquarters, 5.Nagasaki Pref.)

P021 Exploring chromosome regions for high temperature tolerance during ripening period by using chromosome segment substitution lines derived from wild rice

○Hamagashira, A.¹, T. Takashi², H. Kitano³, A. Ito¹, K. Sugiura¹, Y. Ide¹, M. Kato¹ (1.Aichi Agric. Res., 2.STAY GREEN Co., Ltd, 3.Biosci. Biotec. Ctr. Nagoya U.)

P022 “Sorayutaka”, a high-yielding rice variety in Hokkaido region; its characteristics and high-yielding factors

☆Maruta, T.¹, H. Satou¹, M. Kinoshita¹, H. Ozaki², T. Sonoda³, S. Munekata¹ (1.Hokkaido Research Organization Central Agricultural Experiment Station, 2.Hokkaido Research Organization Donan Agricultural Experiment Station, 3.Hokkaido Research Organization Kitami Agricultural Experiment Station)

P023 Genetic variation of heat stress tolerance related traits in durum wheat

☆Mohamed, M.^{1,2}, H. Mustafa², A. Idris², I. Tahir², H. Tsujimoto¹ (1.Arid Land Research Center, Tottori University, 2.Agricultural Research Corporation, Sudan)

P024 Genetic diversity analysis and core collection formation for barley genetic resources in Egypt

☆Elakhdar, A.^{1,2}, T. Kumamaru¹, M. Mansour², R. Brueggeman³, C. Ludovic⁴ (1.Kyushu University, 2.Agricultural Research Center, Egypt, 3.North Dakota State University, USA, 4.Alberta Innovates, Technology Futures, Canada)

P025 Exploring barley genetic resources for barley yellow mosaic and barley rossete green mosaic resistance

○Takayama, T.¹, E. Aoki¹, M. Yamaguchi² (1.NICS, 2.Tochigi Pref.Agric.Exp.stn)

P026 Diversity of *CO/Hd1* homologs in *Miscanthus sacchariflorus* distributed in East Asia and eastern Russia

○Nagano, H. ¹, R. Yonemura ², K. Anzoua ¹, L. Clark ³, E. Sacks ³, T. Yamada ¹ (1.Field Science Center for Northern Biosphere, Hokkaido Univ., 2.Grad. Sch. Env. Sci., Hokkaido Univ., 3.Department of Crop Science, Univ. Illinois, USA)

P027 Association between C gene and stem color in foxtail millet

○Fukunaga, K., M. Ikeda (Fac. Life Environ. Sci., Pref.U.Hiroshima)

P028 Acquisition and characterizatin of hybrids between varities and wild species in breeding of Miyazaki origin 'Sadowa' egg plant

☆Yoshimura, K. ¹, S. Takahashi ¹, T. Hiejima ², L. Chen ^{1,2} (1.Fac. Envir. Hort. Sci., Minami Kyushu U., 2.Grad. Sch. Hort. Food Sci., Minami Kyushu U.)

P029 Development of cytoplasmic male sterile IR64 and Basmati and their restorer lines using CW-CMS/ *Rf17* system

○Toriyama, K., T. Kazama (Grad. Sch. Agri. Sci., Tohoku Univ.)

P030 Genetic analyses of non-pungency in pepper suggesting presence of a novel locus

☆Tsurumaki, K. ¹, T. Sasanuma ^{1,2} (1.United Grad. Sch. Agr. Sci., Iwate Univ., 2.Fac. Agr., Yamagata Univ.)

P031 Evaluation of traits related to canopy development speed using soybean mini core collection

○Kurokawa, S. ¹, A. Kaga ², M. Tsuda ³, D. Sekine ⁴ (1.CARC, 2.NGRC, 3.GRC, U. Tsukuba, 4.NICS)

P032 Field survey on millets in Dindori district of Madhya Pradesh state of India

○Tsuji, K. ¹, S. Nahatkar ², O. Dubey ², S. Tiwari ², P. Parihar ², L. Rajput ² (1.Fac. Edu., Chiba Univ., 2.Jawaharlal Nehru Agricultural Univ.)

P033 A Hokkaido rice variety "Sorayuki", has a high suitability as rice of use, such as the food service industry; its characteristics and high-yielding factors

○Kinoshita, M. ¹, H. Sato ¹, H. Ozaki ², T. Sonoda ³, S. Munekata ¹ (1.Chuo AES,HRO, 2.Donan AES,HRO, 3.Kitami AES,HRO)

P034 Genetic analysis of the domestication related traits using backcross derived lines in emmer wheat

☆Shimada, S. ¹, K. Gyu ¹, C. Vladutu ¹, T. Ishii ², S. Kianian ³, N. Mori ¹ (1.Lab.Crop Evol., Grad. Sch. Of Agric. Sci., Kobe Univ., 2.Lab. Plant Breed., Grad. Sch. Of Agric. Sci., Kobe Univ., 3.USDA-ARS Cereal Disease Lab., Univ. Minnesota, U.S.A)

P035 Development of near-isogenic lines of rice cultivars "IR64" and "Takanari", incorporated with the 4-HPPD inhibitory herbicide resistance gene, *HIS1*

○Kuroki, M. ¹, H. Kato ¹, N. Nishimura ¹, S. Fukuoka ¹, K. Nagata ¹, Y. Nonoue ¹, A. Yamazaki ², K. Sekino ², Y. Yamada ², H. Hirabayashi ¹, H. Sato ¹, Y. Takeuchi ^{1,6}, A. Goto ¹, K. Matsubara ¹, T. Ishii ¹, M. Yamaguchi ¹, H. Maeda ³, T. Yamamoto ¹, T. Takai ⁴, T. Ikka ⁵ (1.Inst. of Crop Sci., NARO, 2.SDS Biotech K.K., 3.Central Region Agric. Res. Cent., NARO, 4.JIRCAS, 5.Shizuoka Univ., 6.Kyushu Okinawa Agric. Res. Cent., NARO)

P036 An SNP at *SH3* locus causes non-shattering in *Oryza glaberrima* Steud.

Win, K. ¹, Y. Yamagata ¹, K. Doi ¹, K. Uyama ¹, Y. Nagai ¹, Y. Toda ², T. Kani ³, M. Ashikari ³, H. Yasui ¹, ○A. Yoshimura ¹ (1.Fac. Agr., Kyushu Univ., 2.Grad. Sch. Sci., Nagoya Univ., 3.Biosci. Biotech. Center, Nagoya Univ.)

P037 Segregation distortion in rice chromosome 1 observed in the progeny derived from crosses between Taichung 65 and aus varieties

☆Kunieda, M. ¹, H. Sunohara ², A. Shimazu ¹, M. Tasaki ², S. Nishiuchi ², K. Doi ² (1.Fac. Agr., Nagoya U., 2.Grad. Sch. Bioagr. Sci., Nagoya U.)

P038 Varietal differences of component properties in rapeseed

○Kawasaki, M. ^{1,2}, K. Hatakeyama ², Y. Takahata ² (1.Tohoku Agricultural Research Center, NARO, 2.Iwate University)

P039 Comparative analysis of complete chloroplast genome sequences in wasabi cultivars and their wild relatives

Michiki, N. ¹, T. Takano ², K. Kobayashi ¹, M. Kobayashi ², K. Yano ², ○K. Yamane ¹ (1.Fac. Appl. Biol. Sci., Gifu U., 2.Agri., Meiji U.)

P040 Toward the QTL analysis of grain dimensions and dormancy in wild emmer wheat

☆Terada, N.¹, N. Mori¹, S. Ohta² (1.Lab. Crop Evolution, Grad. Sch., Kobe Univ., 2.Dept. Biosci., Fukui Pref. Univ.)

P041 Genetic analysis of domestication related traits in emmer wheat: energy partitioning in spike and spikelet

☆Miyazaki, Y.¹, P. Ngoc¹, K. Liberatore², S. Kianian², C. Vladutu¹, N. Mori¹ (1.Lab. Crop Evol.,Grad. Sch. of Agric. Sci., Kobe Univ., 2.USDA-ARS Cereal Disease Lab., Univ. Minnesota, U. S. A.)

P042 "Suzuhokkuri", a new sweetpotato cultivar with good taste and slightly dry texture of baked root

○Kai, Y.¹, M. Yoshinaga³, T. Sakai¹, K. Katayama², A. Kobayashi¹, Y. Takahata¹, Y. Nakazawa¹, T. Kumagai², T. Fujita¹ (1.Kyushu Okinawa Agr. Res. Ctr., NARO, 2.Inst. Crop Sci., NARO, 3.Hokkaido Agr. Res. Ctr., NARO)

P043 QTL study of rhizomatousness in rice using GBS and Bayesian QTL mapping

○Furuta, T.¹, S. Reuscher¹, K. Uehara¹, H. Kondo¹, K. Doi², M. Ashikari¹ (1.Bioscience and Biotechnology Center, Nagoya University, 2.Graduate School of Bioagricultural Science)

P044 QTL Analysis for the Scald Resistance Gene of the Barley Cultivar "Almerfelder"

○Aoki, H., M. Seki, T. Nagamine (NARO Agricultural Research Center)

P045 Analysis of a locus for a tolerance to the high-temperature stress of rice

☆Matsumoto, R.¹, T. Sato^{1,2}, M. Shiraishi¹, I. Wang¹, K. Matsubara¹, K. Tsujiuchi¹, H. Shimada¹ (1.Dept Biol Sci & Technol, Tokyo University of Science, 2.KUDAN Secondary School)

P046 Analysis of a Quantitative Trait Locus (QTL) for a tolerance to the high-temperature stress using rice Chromosome Segment Substitution Lines (CSSLs)

Sato, T.^{1,2}, R. Matsumoto¹, M. Shiraishi¹, L. Wan¹, K. Matsubara¹, K. Tsujiuchi¹, ○H. Shimada¹ (1.Dept Biol Sci & Technol, Tokyo University of Science, 2.Kudan High School)

P047 Use of DNA markers linked to everbearing gene, powdery mildew resistance gene and anthracnose resistance gene in strawberry breeding for cold regions

○Koishihara, H.¹, M. Honjo², T. Shimada¹, H. Tsukazaki², S. Nishimura¹, S. Yui³
(1.TOYOTA MOTOR CORPORATION, 2.NARO/TARC, 3.NARO/TARC (currently Fac. Agri., Iwate Univ.))

P048 Potato cultivar identification using SSR markers

○Kishine, M.¹, K. Tsutsumi², K. Kitta¹ (1.Food Res. Inst., NARO, 2.YAMAZAKI-BISCUITS Co., Ltd.)

P049 QTL analysis for pine wood nematode resistance in *Pinus thunbergii* by GBS method

○Hirao, T.¹, K. Matsunaga², M. Tamura³, A. Watanabe³ (1.FFPRI, Forest Bio-Research Center, 2.FFPRI, FTBC, Kyushu Breeding Office, 3.Kyushu University, Faculty of Agriculture)

P050 Pyramiding effects of the Yamadanishiki alleles at large grain QTLs in the Koshihikari genetic background

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P051 Development of ddRAD markers in *Cryptomeria japonica*

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P052 QTL analysis of grain shape and grain appearance quality in *Oryza sativa* L. 'Hokuriku 193'

○Nagaoka, I.¹, H. Sasahara¹, K. Matsushita¹, H. Maeda¹, H. Tabuchi², A. Shigemune³, S. Fukuoka⁴, T. Ando⁴, K. Miura⁵ (1.CARC/NARO, 2.KARC/NARO, 3.WARC/NARO, 4.NICS/NARO, 5.Ex. NARO)

P053 Genetic analysis of *Apq1* gene, providing tolerance to high-temperature during ripening stage in rice

☆Takehara, K. ¹, K. Murata ², T. Yamaguchi ², T. Ebitani ², H. Ogiwara ³, Y. Iwasaki ¹, K. Miura ¹ (1.Dept, Biosci, Fukui Pref, Univ., 2.Toyama Pref. Agr. For. & Fis. Res. Cent., 3.Institute of Crop Science, NARO)

P054 Development of a model strain and application of map-based cloning in the genus *Chrysanthemum*

☆Aruga, Y. ¹, M. Nakano ¹, T. Kozuka ¹, Y. Masuda ¹, H. Hirakawa ², K. Sumitomo ³, M. Yagi ³, Y. Nakano ³, T. Hisamatsu ³, S. Isobe ², K. Taniguchi ¹, M. Kusaba ¹ (1.Grad. Sch. Sci., Univ. Hiroshima, 2.Inst., Kazusa DNA Res., 3.NARO Inst., Floricultural Sci.)

P055 Development and evaluation of near isogenic lines with early heading genes in the rice cultivar "Aichinokaori SBL" genetic background

○Ide, Y., A. Itou, K. Sugiura, A. Hamagashira, M. Katou, Y. Nakajima (Aichi Agr.Res.Cent.)

P056 Development of genetic maps of potato by SolCAP 12K potato array

☆Habe, I. ¹, K. Miyatake ², T. Nunome ², M. Yamasaki ³, T. Hayashi ⁴ (1.Nagasaki Agri. and Fore. Tech. Dev. Ctr, 2.NIVFS, 3.Food Resouces Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe U., 4.NICS)

P057 Sorghum DW1 positively regulates BR signaling by inhibiting the nuclear localization of BIN2

☆Hirano, K. ¹, H. Sasaki ¹, M. Kawamura ¹, S. Araki-Nakamura ¹, H. Fujimoto ¹, K. Ohmae-Shinohara ¹, M. Yamaguchi ¹, A. Fujii ¹, S. Kasuga ², T. Sazuka ¹ (1.Biosci. and Biotech. Center, Nagoya Univ., 2.Faculty of Agriculture, Shinshu Univ.)

P058 Genetic analysis of an important dwarfing locus, *qCL-7a*, for sorghum F₁ seed production

☆Yamaguchi, M. ¹, A. Fujii ², S. Nakamura-Araki ², S. Okamura ¹, K. Shinohara-Ohmae ², S. Kasuga ³, M. Matsuoka ², H. Kitano ², T. Saduka ² (1.Grad. Sch. Bioagri. Sci, Univ. Nagoya, 2.Biosci. and Biotech. Center, Univ. Nagoya, 3.Faculty of Agriculture, Univ. Shinshu)

P059 Genetic analysis of sugar yield in sorghum juice

☆Fujii, A. ¹, T. Wada ², S. Nakamura-Araki ¹, K. Kurami ¹, K. Shinohara-Ohmae ¹, Y. Ito ¹, H. Kitano ¹, M. Matsuoka ¹, S. Kasuga ³, T. Sazuka ¹ (1.Biosci. and Biotech. Center,Nagoya Univ., 2.Grad. Sch. Bioagri. Sci, Univ. Nagoya., 3.Faculty of Agriculture, Shinshu Univ.)

P060 Fine mapping of rice pre-harvest sprouting resistance QTLs, *Sdr6a* and *Sdr6b*, on the chromosome 1 of *indica* Nona Bokra

☆Iijima, N. ¹, K. Sugimoto ², T. Hoshino ¹ (1.Fac. Agr., Yamagata Univ., 2.Institute of Crop Sci., NARO)

P061 QTL analysis of biomass-related traits in young trees of *Cryptomeria japonica*c

○Matsumoto, A. ¹, S. Ueno ¹, T. Fujiwara ¹, K. Yamashita ¹, Y. Moriguchi ², K. Uchiyama ¹, H. Mori ³, T. Ihara ¹, S. Kanetani ⁶, Y. Sakai ⁶, T. Yoshida ¹, N. Futamura ¹, Y. Matsui ⁴, R. Kusano ⁵, Y. Tsumura ³ (1.Forestry and Forest Products Research Inst., 2.Univ. Niigata, 3.Univ. Tsukuba, 4.Amakusa wide area HQ, Kumamoto, 5.Pref. north wide area HQ, Kumamoto, 6.Kyushu Research Center, FFPRI)

P062 Fine mapping and characterization of XA42, A gene showing multiple resistance to rice bacterial blight strains

☆Busungu, C. ¹, K. Ichitani ², J. Sakagami ², T. Anai ³, Y. Kawaguchi ², K. Kawabe ⁴, S. Taura ⁴ (1.United Grad.Sch.Agr.Sci.,Kagoshima U., 2.Fac.Agric.,Kagoshima U., 3.Fac.Agric.,Saga U., 4.Inst.Gene Res.,Kagoshima U.)

P063 Genome sequencing of a rice cultivar 'Akinokirameki' using MinION sequencer

○Takahashi, H. ¹, K. Kato ², T. Kawamoto ², K. Ueda ¹, K. Sakurai ¹, A. Watanabe ¹, H. Akagi ¹ (1.Fac. Biores. Sci., Akita Pref. U., 2.Akita Pref. Agriculture Research Center)

P064 High-density linkage map construction and QTL analysis for *Streptomyces ipomoeae* pathogen resistance in sweetpotato

☆Aikawa, Y. ¹, K. Shirasawa ², Y. Okada ³, O. Jahana ⁴, A. Kuramoto ⁵, Y. Imai ⁶, S. Isobe ², M. Tahara ¹, Y. Monden ¹ (1.Grad. Sch. Env. & Life Sci., Okayama Univ., 2.Kazusa DNA Res. Inst., 3.KONARC, 4.OPARC, 5.Grad. Sch. Agri., Kyoto Univ., 6.Tottori Univ. Technical dept.)

P065 Development of high accuracy markers for the Fusarium yellows resistance gene, *FocBo1*, in *Brassica oleracea*

☆Sato, M.¹, M. Shimizu², R. Fujimoto³, E. Fukai¹, K. Okazaki¹ (1.Grad. Sch. Sci., Niigata Univ., 2.Iwate Biotech. Res. Ctr., 3.Grad. Sch. Agric. Sci., Kobe Univ.)

P066 QTL analysis for translocation related traits during maturity stage in rice (*Oryza sativa* L.)

☆Phung, D.¹, H. Sunohara¹, S. Nishiuchi¹, H. Yasui², K. Doi¹ (1.Gad. Sch. Bioagr. Sci., Nagoya U., 2.Fac. Agr., Kyushu U.)

P067 Introgression and evaluation of the rice yield-related QTLs from Habataki in Basmati 370 background

☆Nthia, P.¹, H. Sunohara¹, M. Tasaki¹, N. Komeda¹, D. Makihara², H. Kitano³, S. Nishiuchi¹, K. Doi¹ (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.ICCAE, Nagoya U., 3.Biosci. Biotech. Ctr., Nagoya U.)

P068 Development of crop genome editing techniques using CRISPR/Cpf1

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P069 Analys of physiological function LEA14A

☆Miyazaki, K.¹, R. Suzuki¹, R. Tashiro¹, H. Kusano², H. Shimada¹ (1.Dept.of Biol. Sci & Technol., Tokyo Univ of Sci., 2.Research Institute for Sustainable Humanosphere., Univ.Kyoto)

P070 Analysis of the *panicle tip abortion* mutants in rice

☆Sunohara, H.¹, M. Tasaki¹, S. Nishiuchi¹, Y. Inukai², K. Doi¹ (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.ICCAE, Nagoya U.)

P071 Comparison of the specificity toward the target gene between the TGS and PTGS in transgenic rice

○Wakasa, Y., F. Takaiwa, K. Ozawa (NARO)

P072 CYC genes control morphogenesis of ray and disc flowers in Dahlia variabilis

☆Kubota, K., H. Kokubun, K. Miyoshi (Chiba University Graduate School of Horticulture)

P073 Subunit stoichiometry of heterotrimeric G protein α and β subunit in rice

☆Kishi, Y., Y. Sakai, Y. Matsunaga, T. Itoh, T. Hibi, S. Segami, K. Miura, Y. Iwasaki (Dept. Biosci. , Fukui Pref. Univ.)

P074 Does the cloning of ASG-1 gene family support the theory of apomixis controlled by one dominant gene (family)?

○Chen, L. ¹, L. Guan ², C. Miyazaki ³, A. Saito ³, A. Kojima ³ (1.Fac. Envir. Hort. Sci., Minami Kyushu U., 2.Fac. Edu. & Cult., U. Miyazaki, 3.Kyushu-Okinawa Agri. Research Center)

P075 Development of DNA markers for isolation of the genes responding to transformation efficiency in barley

○Hisano, H. ¹, H. Munemori ¹, Y. Motoi ¹, N. Shinkai ², J. Sese ², A. Toyoda ³, K. Sato ¹ (1.IPSR, Okayama Univ., 2.AIRC, AIST, 3.Comparative Genomics, NIG)

P076 Analysis of Arabidopsis *FLO2* gene

☆Kihira, M. ¹, K. Taniguchi ¹, C. Kaneko ¹, Y. Ishii ¹, H. Aoki ¹, A. Koyanagi ¹, H. Kusano ^{1,4}, N. Suzui ², Y. Yin ², N. Kawachi ², S. Fujimaki ³, H. Shimada ¹ (1.Department of Biological Science and Technology, Tokyo University of Science, 2.Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology, 3.Department of Management and Planning, National Institutes for Quantum and Radiological Science and Technology, 4.Research institute for Sustainable Humanosphere, Kyoto University)

P077 Redox regulation by plant hormones in rice

○Morino, K., M. Kimizu (Central Region Agricultural Research Center, NARO)

P078 Analysis of a temperature-sensitive virescent mutant of rice induced by heavy-ion beam

○Morita, R. ¹, M. Nakagawa ², H. Takehisa ^{1,3}, Y. Hayashi ¹, H. Ichida ¹, S. Usuda ¹, K. Ichinose ¹, H. Abe ¹, Y. Shirakawa ¹, H. Tokairin ¹, T. Sato ^{1,4}, M. Fujiwara ^{1,5}, R. Itoh ⁶, T. Abe ¹ (1.RIKEN, Nishina Cent., 2.Ishinomaki Senshu Univ., 3.NARO, 4.Grad. Sch. Agric. Sci., U. Tohoku, 5.Sophia Univ., 6.U. Ryukyus)

P079 Chromosome analysis of tea tree *Camellia sinensis* and the relatives, by means of FISH of caffeine marker and detection of 5-methylated cytosine

○Furukawa, K. ¹, F. Kitamura ¹, D. Endo ¹, R. Orihara ¹, A. Ogino ² (1.National Institute of Technology, NUMAZU college, 2.NARO(NIFTS))

P080 Expression analysis of OSHB genes in rice seminal root

☆Nosaka-Takahashi, M. ¹, N. Satoh-Nagasawa ², K. Hibara ³, Y. Inukai ¹ (1.ICCAЕ, Nagoya Univ., 2.Dept. Biol. Prod., Akita Pref. Univ., 3.Grad. Sch. Agr. Life Sci., Univ. Tokyo)

P081 Quantitative analysis of intra-molecular recombination of mitochondrial genome in wheat using qPCR

☆Ohta, S. ¹, M. Makita ¹, M. Tsujimura ², T. Terachi ², N. Mori ¹ (1.Lab.Crop Evol., Grad. Sch. Of Agric. Sci., Kobe Univ., 2.Fac. Life Sci., Kyoto Sangyo U .)

P082 Genomic distribution and insertion preference of soybean retrotransposon *SORE-1*

☆Nakashima, K., M. Tsuchiya, M. Kasai, J. Abe, A. Kanazawa (Res. Fac. Agr., Hokkaido Univ.)

P083 Analysis of FLO2 complex involved in biosynthesis of rice seed storage substances

☆Suzuki, R. ¹, K. Miyazaki ¹, T. Suzuki ¹, J. Hurusawa ¹, T. Imamura ², H. Kusano ³, K. Sekine ⁴, T. Yamashita ⁵, H. Shimada ¹ (1.Tokyo University of Science, 2.Ishikawa Prefectural Univ., 3.Kyoto University, 4.University of the Ryukyus, 5.Iwate University)

P084 Development of expression constructs for visualizing tissues by the accumulation of anthocyanin pigments in various rice cultivars

○Taniguchi, Y. ¹, M. Oshima ¹, H. Ichikawa ¹, Y. Tabei ¹, M. Akasaka ², J. Tanaka ² (1.NIAS, 2.NICS)

P085 Global analysis of expression level polymorphisms associated with aluminum tolerance in *Arabidopsis thaliana*

☆Kusunoki, K. ¹, Y. Nakano ¹, K. Tanaka ², Y. Sakata ³, H. Koyama ^{1,4}, Y. Kobayashi ^{1,4} (1.Uni. Grad. Sch. Agr. Sci., Gifu Univ., 2.NODAI Genome Res. Ctr., Tokyo Univ. Agr., 3.Appl. Biosci., Tokyo Univ. Agr., 4.App. Biol. Sci., Gifu Univ.)

P086 A web database CATchUP: comprehensive identification of spatiotemporally expressed genes and database construction

☆Nakamura, Y.¹, T. Kudo¹, S. Terashima¹, M. Saito¹, E. Nambara², K. Yano¹ (1.Sch. of Agri., Meiji Univ., 2.Sch. of Cell & Systems Biology., Toronto Univ.)

P087 Relationship between gradual deletion of chromosome 1D and glutenin expression in common wheat

○Tanaka, H., E. Uchida, E. Shimizu (Fac. Agr., Tottori Univ.)

P088 Analysis of high phosphate accumulation rice mutants obtained by screening based on field transcriptomics study

☆Takehisa, H., Y. Sato (Institute of Crop Science, NARO)

P089 Global analysis of gene expression in eggplant for parthenocarpy

☆Miyatake, K.¹, T. Saito¹, E. Yamamoto¹, H. Yamaguchi¹, A. Ohyama¹, H. Fukuoka², T. Nunome¹ (1.Institute of Vegetable and Floriculture Science, NARO, 2.Takii Seed Co. Ltd.)

P090 Construction of a field information management system for plant breeding

☆Kobayashi, M.¹, S. Asano¹, K. Kamatsuki^{1,2}, H. Ohyanagi^{1,3}, H. Kajiya-Kanegae⁴, H. Takanashi⁴, T. Tokunaga⁵, T. Sazuka⁶, H. Iwata⁴, N. Tsutsumi⁴, K. Yano¹ (1.Sch. of Agri., Meiji Univ., 2.Mitsubishi Space Software Co., Ltd., 3.Comput. Biosci. RC. (CBRC), King Abdullah Univ. Sci. Tech. (KAUST), 4.G. Sch. of Agricultural and Life Sci., The Univ. of Tokyo, 5.EARTHNOTE Co.,Ltd., 6.Bioscience and Biotechnology Center, Nagoya Univ.)

P091 Elucidation of promotion mechanism of root development in rice seedling inoculated with biofertilizer bacteria *Bacillus pumilus* TUAT1 by transcriptome analysis

☆Higuma, S.¹, N. Ueno², T. Kozaki³, M. Kanekatsu², T. Yamada², T. Yokoyama² (1.Grad. Sch. Agr., Tokyo U. Agr. Tech., 2.United Grad. Sch. Agr., Tokyo U. Agr. Tec., 3.Fac. Agr., Tokyo U. Agr. Tech.)

P092 A web database PlantExpress: Comparative analysis of gene expression networks between *Oryza sativa* and *Arabidopsis thaliana*

☆Kudo, T., S. Terashima, Y. Takaki, K. Tomita, M. Saito, M. Kanno, K. Yokoyama, K. Yano (Sch. Agri., Meiji Univ.)

P093 Transcriptome analysis on tomato leaf marginal necrosis

☆Ueno, H.¹, T. Maeda², N. Katsuyama², Y. Katou², S. Matsuo¹, K. Yano¹, A. Ando¹, K. Nagasuga¹, M. Yamada¹, S. Imanishi¹ (1.Inst.Veg. Flori. Sci., NARO, 2.Gifu Agricult. Tech. Cen.)

P094 Attempt to improve accuracy of rice growth prediction based on meteorological cluster analysis

☆Kondo, T.¹, S. Nishiuchi² (1.Fac. Agr., Nagoya U., 2.Grad. Sch. Bioagr. Sci., Nagoya U.)

P095 Linear energy transfer-dependent change in rice gene expression profile

☆Ishii, K.¹, Y. Kazama¹, R. Morita¹, T. Hirano², T. Ikeda¹, S. Usuda¹, Y. Hayashi¹, S. Ohbu¹, R. Motoyama³, Y. Nagamura³, T. Abe¹ (1.RIKEN Nishina Cent., 2.Fac. Agric., Univ. Miyazaki, 3.NARO)

P096 Improved DNA markers for screening of candidates related to potato genetic resources with resistance to white potato cyst nematode

○Shimosaka, E.¹, Y. Yamashita², K. Asano¹, S. Tamiya¹ (1.Hokkaido Agri. Res. Cent., NARO, 2.Central Agri. Exp. Stn., HRO)

P097 Fine mapping of *RBG3*, a quantitative trait locus for resistance to *Burkholderia glumae* in rice, and combined effect with *RBG2* and *RBG3*

○Mizobuchi, R.¹, S. Fukuoka¹, C. Tuiki¹, S. Tsushima², H. Sato¹ (1.NARO, 2.Tokyo University of Agriculture)

P098 Breeding of low soil temperature tolerant sweetpotato lines utilizing overseas genetic resources, and the points which should be improved

○Kuranouchi, T.¹, K. Ishiguro², M. Nishinaka¹, A. Takada³, K. Katayama¹ (1.Institute of Crop Science, NARO, 2.Hokkaido Agricultural Research Center, NARO, 3.Headquarters, NARO)

P099 Improvement of *BSR1*-expressing disease resistant rice using constitutive and pathogen-inducible promoters 3. Blast and brown spot resistance

☆Maeda, S., S. Goto, H. Takatsuji, M. Mori (NIAS)

P100 Evaluation of recombinant inbred lines having *Pias(t)*, a blast resistance gene derived from 'Asominori' in rice

☆Nakagomi, Y.¹, T. Endo¹, Y. Ishimori¹, T. Nishio² (1.Miyagi Pref. Furukawa Agric. Exp. Stn., 2.Grad.Sch.Agr.Sci.,Tohoku Univ.)

P101 Evaluation of PLDMV resistance in backcross individuals derived from intergeneric hybrids between *Carica papaya* and *Vasconcellea cundinamarcensis*

○Tarora, K.¹, S. Kawano², K. Yasuda³, M. Tamaki¹, H. Matsumura⁴, N. Urasaki¹ (1.Okinawa Pref. Agric. Res. Cent., 2.Okinawa Pref. Agric., Fores. and Fishe. Promo. Cent., Yaeyama, 3.Okinawa Pref. Fores. Reso. Res. Cent., 4.Gene Res. Cent., Shinshu Univ.)

P102 Genetic variation of heat tolerance related traits in multiple synthetic derivatives population

☆Elbashir, A.^{1,3}, Y. Gorafi^{2,3}, I. Tahir³, A. Elhashimi³, M. Abdalla³, H. Tsujimoto² (1.The United Graduate School of Agricultural Sciences, Tottori University, Japan, 2.Arid Land Research Center,Tottori University, Japan, 3.Agricultural Research Corporation, Sudan)

P103 Study on growth features of a cadmium-tolerant *argonaute1* mutant of *Arabidopsis*

○Watanabe, A.¹, S. Nakamura¹, S. Kumagai², S. Nakamura¹, K. Ueda¹, K. Sakurai¹, H. Takahashi¹, H. Akagi¹ (1.Fac. Bioresource Sci., Akita Prefectural Univ., 2.Grad. Sch. Bioresource Sci., Akita Prefectural Univ.)

P104 Genome-wide association study of aluminum tolerance in *Arabidopsis thaliana* ecotypes

☆Nakano, Y.¹, K. Kusunoki¹, S. Iuchi², M. Kobayashi², Y. Kobayashi^{1,3}, H. Koyama^{1,3} (1.Uni. Grad. Sch. of Agr. Sci., Univ. Gifu, 2.RIKEN BRC, 3.Appl. Biol. Sci., Univ. Gifu)

P105 Observation of leaf blade tissue of rice infected with transgenic rice blast fungus expressing GUS gene

○Iwai, T., K. Sato (Sch. Food Agri. Envi. Sci., Univ. Miyagi)

P106 QTL analysis of blast field resistance in rice using a recombinant inbred lines derived from a cross between 'Yamabiko' and 'Koshihikari'

○Sato, H., T. Kataoka, R. Mizobuchi (NARO)

P107 Resistance to bacterial blight in rice cultivar Asominori. IV. How is field resistance expressed?

○Taura, S.¹, T. Tanaka², C. Busungu³, Y. Kawaguchi², K. Kawabe¹, K. Ichitani²
(1.Div. Gene Res., Kagoshima U., 2.Fac. Agri., Kagoshima U., 3.United. Grad. Sch. Agri. Sci. Kagoshima U.)

P108 Genetic mechanism for soil-surface rooting in rice (*Oryza sativa* L.)

☆Tomita, A.¹, Y. Fukuta² (1.Univ. Tsukuba, 2.JIRCAS)

P109 Differences in low-temperature germination of Hokkaido rice cultivars and effects of hot water treatment on germination

○Sagehashi, Y., Y. Sato (NARO Hokkaido Agr Res Cent)

P110 Studies on *PgNAC67* of Pearl millet in response to salinity stress

☆Shinde, H.^{1,2}, A. Dudhate^{1,2}, D. Tsugama³, S. Liu⁴, T. Takano^{1,2} (1.ANESC., Univ. Tokyo, 2.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 3.Res. Fac. Agri., Univ. Hokkaido, 4.Northeast Forestry, Univ. China)

P111 Combination of a novel sprouting tolerance QTL and grain dormancy *MFT-3A* gene contributes to the excellent resistance to pre-harvest sprouting in winter wheat

☆Nishimura, T.^{1,2}, T. Kamada³, W. Nakane³, H. Jinno⁴, K. Nakamichi⁵, T. Abe⁵, A. Torada⁶, K. Onishi³, M. Mori³, H. Miura³ (1.Kamikawa Agri.Exp.Stn.,HRO, 2.UGAS, Iwate Univ., 3.Obihiro Univ.Agric.&Vet.Med., 4.Kitami Agri.Exp.Stn.,HRO, 5.Central Agri.Exp.Stn.,HRO, 6.HOKUREN Agric.Res.Inst.)

P112 Analysis of microbial communities in soybean rhizosphere soil under inoculation with *Calonectria illicicola*

○Hishinuma, A.¹, S. Ochi², Y. Urashima², Y. Suga², S. Shimamura¹, S. Kato¹, K. Hirata¹, A. Kikuchi¹ (1.Tohoku Agricultural Research Center, NARO, 2.Central Region Agricultural Research Center, NARO)

P113 Effect of pre-drying for rice seeds on the growth in early stage after hot water disinfection at high temperature

☆Kuroiwa, Y.¹, K. Murata², H. Ozaki², T. Yamada¹, M. Kanekatsu¹ (1.Grad. Sch. Agri., Tokyo Univ. Agr. And Tech.,, 2.Toyama Pref. Agr., Fores. Fish. Res. Cent.)

P114 Analysis on the roles of gene products from "Awaakamai" involved in low-temperature germinability of rice during seed maturation

☆Takahashi, J. ¹, K. Mizutori ¹, K. Kimata ², T. Yamaguchi ³, T. Yamada ¹, M. Kanekatsu
¹ (1.Grd. Sch. Agr., Tokyo U. Agr. Tec., 2.Fac. Agr., Tokyo U. Agr. Tec., 3.Toyama pref.
Agr. Forest. Fish. Res. Cent.)

P115 Genetic analysis of the ability to set fruits at high temperature of tomato

○Nunome, T. ¹, H. Matsunaga ¹, H. Namiki ², K. Miyatake ¹, H. Yamaguchi ¹, E.
Yamamoto ¹, H. Fukuoka ^{1,3} (1.Inst. Veg. Flor. Sci., NARO, 2.Kaneko Seeds Co., Ltd.,
3.Takii & Co., Ltd.)

P116 Influence of Aluminum to rice in sodic soil

☆Miyauchi, N. ¹, S. Liu ², H. Nakanishi ³, T. Takano ¹ (1.ANESC, Univ. Tokyo, 2.Northeast
Forestry Univ., China, 3.Grad. Sch. Agri. Life Sci., Univ. Tokyo)

P117 Enhancement of insecticide efficiency by fusolin protein derived from an
entomopoxvirus

☆Oshima, M., W. Mitsuhashi, Y. Tabei (NIAS)

P118 Analyses of ultra-fast response and systemic acquired acclimation of Arabidopsis
to heat stress

☆Ooyoshi, K., M. Inatsune, N. Suzuki (Sophia University, Faculty of Science and
Technology)

P119 Characterization of Arabidopsis deficient in transcription factors responsive to a
heat-drought combination

☆Nagura, M., K. Honda, N. Suzuki (Sophia University, Faculty of Science and Technology)

P120 Evaluation of response to environmental stress conditions in rice using NERICA
and local varieties in Africa

☆Agata, A. ¹, D. Juventia ², T. Hobo ³, S. Ota ¹, K. Doi ¹, Y. Inukai ⁴, D. Makihara ⁴, H.
Kitano ³ (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Fac. Agr., Nagoya U., 3.Biosci. Biotec.
Ctr., Nagoya U., 4.ICCAE, Nagoya U.)

P122 The research of fluctuation of barley grain quality in field : Analysis of the factor related to the change of beta-glucan content and glassy grain rate

○Yanagisawa, T. ¹, T. Nagamine ², M. Oyama ³, T. Kato ³, T. Sekiya ³, E. Aoki ¹
(1.NICS/NARO, 2.CARC/NARO, 3.Tochigi Pref. Agri. Exp. Sta.)

P123 QTLs for eating quality and grain appearance quality in a RIL population derived from a cross between old cv. Yukihikari and recent cv. Joiku462 in Hokkaido

Kinoshita, N. ¹, M. Kato ¹, K. Koyasaki ², T. Kawashima ², T. Nishimura ^{3,4}, Y. Hirayama ³, I. Takamure ², T. Sato ³, ○K. Kato ¹ (1.Obihiro Univ. Agr. & Vet. Med., 2.Res. Fac. Agr., Hokkaido Univ., 3.Kamikawa Agr. Exp. Sta., HRO, 4.United Grad. Sch. Agric. Sci., Iwate Univ. (Obihiro Univ. Agr. & Vet. Med.))

P124 The locus regulating large grain of rice cultivar 'Fusayoshi', *LKF*, is identical to *OsPPKL1* locus

○Kato, T., A. Horibata (Faculty of Biology-Oriented Science and Technology, Kindai University)

P125 Genotype×environment interaction of seed size and yield related traits in Dainagon Azuki bean

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P126 Relation between grain weight distribution and panicle structure in Japanese rice cultivars

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P127 Diversity of the chain-length distribution of amylopectin among Japanese landraces core collection

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P128 Analysis of varietal difference of arbuscular mycorrhizal responsiveness among soybean cultivars

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P129 Soybean Lines suitable for Hokuriku region

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P130 Fine mapping of QTL for s-methylmethionine (Vitamin U) concentration in soybean seed

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P131 The changes of water-soluble beta-glucan in the wheat/barley-bread

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P132 Functional analysis of *qPBL6* regulating primary rachis branch length of rice panicle using near isogenic line

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P133 A challenge to classify of rice grain appearance with DeepLearning plamtform Caffe

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P134 Wheat yield improvement by KODA treatment in response to nitrogen deficient stress at early growing stage

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P135 Agronomic and quality characters of a near-isogenic line of wheat cultivar 'Minaminokaori' carrying the high grain protein content gene, TtNAM-B1

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P136 Imaging of starch grains in endosperm by fluorescent protein

○Matsushima, R., H. Hisano (Institute of Plant Science and Resources, Okayama University)

P137 Identification of quantitative trait loci controlling floral morphology of rice using a backcross population between cultivated and wild rice

○Ishikawa, R., T. Watabe, R. Nishioka, P. Thanh, T. Ishii (Grad. Sch. Agr. Sci., Kobe Univ.)

P138 Genetic analysis of heterotrimeric G-protein mutants in rice

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P139 Toward identification of novel loci controlling non-shattering of seeds in an Indica rice cultivar, 'IR36'

☆Tsujimura, Y., C. Inoue, T. Htun, A. Nishimura, S. Sugiyama, Y. Oka, T. Ishii, R. Ishikawa (Grad. Sch. Agr. Sci., Kobe Univ)

P140 Analysis of maize *small embryo3* (*sem3*) mutant, exhibiting abnormal embryonic polarity

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P141 Phenological variation of growth stage and phytohormone profiles in wild and domesticated barley under field condition

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P142 Variation of symbiotic nitrogen fixation capacity in soybean mini core collection

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P143 ESOFB2, an endosperm-specific F-box protein interacts with Orysa;KRP4

Sugiyama, T., N. Fujiwara, S. Matsuda, M. Mizutani, ○Y. Saitoh (Cryobiofrontier Research Center, Faculty of Agriculture, Iwate University)

P144 Fine mapping of the 'Chogokuwase (extra-early flowering)' gene in wheat

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P145 Effect of interaction between *LUX/PCL1* genotypes on heading time of wheat

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P146 SSR marker analysis of apomixis like plants obtained from crosses using *Cymbidium Sarah Jean 'Ice Cascade'* as female parent

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P147 Genomic analysis of parent-of origin allelic expression in *Brassica rapa*

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P148 Varietal differences in fruit setting in interspecific hybridizations between *Ipomoea nil* and *I. hederacea*

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P149 Genetic analysis of hybrid sterility and sex-limited inflorescence morphology in the genus *Spinacia*

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P150 Genetic interaction between epigenetic reprogramming mediated by MEL1 Argonaute and the homologous pairing process in rice meiosis

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P151 Transcriptome analysis of hybrid tobacco cells (*Nicotiana suaveolens* x *N. tabacum*) expressing lethality

☆Yamashita, H.¹, N. Ueno², D. Nagashima¹, T. Kozaki³, W. Marubashi⁴, M. Kanekatsu², T. Yamada² (1.Grad. Sch. Agr., Tokyo U. Agr. Tech., 2.United Grad. Sch. Agr., Tokyo U. Agr. Tech., 3.Fac. Agr., Tokyo U. Agr. Tech., 4.Fac. Agr., Meiji U.)

P152 Chromosome doubling of gentians by nitrous oxide (N₂O) treatment

☆Takamura, Y.^{1,2}, R. Takahashi², T. Hikage², K. Hatakeyama¹, Y. Takahata¹ (1.Fac. Agri., Iwate Univ., 2.Hachimantai City Floricultural R & D Center)

P153 Varietal difference in the degree of hybrid weakness caused by the complementary genes, *Hwa1-1* and *Hwa2-1*, in rice

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P154 Analysis on the zygotic chromosome breakage induced by gametocidal genes in wheat

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