

Title of Papers Presented at the 138th Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 Construction of spinach pseudomolecules to enhance breeding efficiency

○Hirakawa, H. ¹, A. Toyoda ², T. Itoh ³, Y. Suzuki ⁴, A. Nagano ⁵, S. Sugiyama ⁶, Y. Onodera ⁷ (1.Kazusa DNA Res. Inst., 2.Nat. Inst. Genet., 3.Sch. Life Sci. Tech., Tokyo Inst. Tech., 4.Grad. Sch. Front. Sci., Univ. Tokyo, 5.Fac. Agr., Ryukoku Univ., 6.Sch. Agr., Hokkaido Univ., 7.Res. Fac. Agr., Hokkaido Univ.)

102 QTLs for improving pigmentation of fruit pericarp under low UV light condition in eggplant

○Miyatake, K. ¹, M. Watanabe ¹, K. Oku ², S. Morita ³, H. Monden ³, C. Hirata ³, T. Wada ³, K. Shimomura ³, A. Nagano ⁴, Y. Shinmura ¹, H. Matsunaga ¹ (1.NIVFS, NARO, 2.Fukuoka Agric. Minami-Chikugo Agric. Ext. Cent., 3.Fukuoka Agric. Forest. Res. Cent., 4.Fac. Agri. Ryukoku Univ.)

103 Development of DNA marker linked to the QTL for improving pigmentation of fruit pericarp under low UV light condition

☆Monden, H. ¹, K. Oku ¹, S. Morita ¹, K. Miyatake ², M. Watanabe ², C. Hirata ¹, T. Wada ¹, K. Shimomura ¹, M. Mori ¹, S. Nagamatsu ¹, Y. Tanaka ¹ (1.Fukuoka Agric. Forest. Res. Cent, 2.NIVFS., NARO)

104 Estimation of loci involved in soluble solids content in netted melon

☆Sato, N. ¹, M. Ogawa ¹, Y. Akashi ², R. Ishikawa ¹, K. Tanaka ¹, K. Kato ² (1.Fac. Agr. Life Sci., Hirosaki U., 2.Grad. Sch. Environ. Life Sci., Okayama U.)

105 Genomic prediction and GWAS using founder haplotypes of apple

☆Minamikawa, M. ¹, M. Kunihiisa ², K. Noshita ^{3,4}, S. Moriya ², K. Abe ², T. Hayashi ⁵, Y. Katayose ⁶, T. Yamamoto ², H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.NIFTS,

NARO, 3.Faculty of Sci., Kyushu Univ., 4.Plant Fron. Res. Cent., Kyushu Univ., 5.RCAIT, NARO, 6.NICS, NARO)

106 Detection and estimation of gene effects via GWAS based on haplotype phylogenetic relationships

☆Hamazaki, K. ¹, M. Ishimori ¹, L. Sakamoto ¹, Y. Toda ¹, Y. Omori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, H. Kajiya-Kanegae ⁵, H. Tsujimoto ², Y. Sawada ⁶, A. Kaga ⁷, M. Nakazono ³, T. Fujiwara ¹, H. Iwata ¹ (1.Grad. Sch. Agr. Life. Sci., Univ. Tokyo, 2.Arid Land Res. Ctr., Tottori Univ., 3.Grad. Sch. Bioagri. Sci., Nagoya Univ., 4.T-PIRC, Univ. Tsukuba, 5.Res. Ctr. for Agr. Info. Tech., NARO, 6.CSRS, RIKEN, 7.Inst. Crop Sci., NARO)

107 Characterization of a QTL for stay-green trait associated with organophosphate pesticide resistance

☆Jing, Z. ¹, T. Takami ¹, H. Takanashi ², F. Wacera W ¹, H. Kajiya-Kanegae ³, N. Ohnishi ¹, H. Iwata ², N. Tsutsumi ², W. Sakamoto ¹ (1.Inst. Plan. Sci. Res., Univ. Okayama, 2.Grad. Sch. Agri and Life Sci, Univ. Tokyo, 3.RCAIT, NARO)

108 Completion of microbiome beta diversity kernel of soybean using genome and ionome information

☆Ono, K. ¹, Y. Toda ¹, S. Kobori ², E. Shirai ², T. Sato ², K. Kumaishi ², Y. Ohmori ¹, Y. Yamasaki ³, H. Takahashi ⁴, H. Takanashi ¹, M. Tsuda ⁵, M. Hirai ⁶, H. Tsujimoto ³, A. Kaga ⁷, M. Nakazono ⁴, T. Fujiwara ¹, Y. Ichihashi ², H. Iwata ^{1,3} (1.Grad. Sch. Agr. Life Sci., Univ. of Tokyo, 2.RIKEN BioResource Research Center, 3.ALRC, Tottori Univ., 4.Grad. Sch. Bioagri. Sci., Nagoya Univ., 5.T-PIRC, Univ. Tsukuba, 6.CSRS, RIKEN, 7.NICS, NARO)

109 Identification of the regulatory genes of sugar metabolism in tomato fruit set using multi-omics analysis

☆Shinozaki, Y. ^{1,2}, K. Ezura ^{1,3}, K. Nishida ⁴, K. Mori ⁵, S. Kuhara ⁵, Y. Suzuki ⁶, H. Enomoto ⁷, M. Kusano ^{1,8}, A. Fukushima ⁸, T. Mori ⁸, H. Ezura ¹, T. Ariizumi ¹ (1.Fac. Life Environ. Sci., Univ. Tsukuba, 2.GIR, Tokyo Univ. Agri. Tech., 3.BPRI, AIST, 4.EGBRC, Kobe Univ., 5.Fac. Agr., Kyushu Univ., 6.CBMS, Univ. Tokyo, 7.Dept. Biosci., Teikyo Univ., 8.CSRS, RIKEN)

110 Deep learning on crop genomes: applications to short sequences and its potential

○Akagi, T. ¹, S. Uchida ² (1.Grad. Sch. Environ. Life Sci., Okayama Univ., 2.Grad. Sch. Info. Sci. Electr. Eng., Kyusyu Univ.)

111 Publication of the official version of PlantGARDEN, a plant genome information portal site

○Ichihara, H. ¹, D. Harada ¹, A. Ghelfi ¹, M. Kohara ¹, M. Yamada ¹, S. Shirasawa ¹, J. Fawcett ¹, T. Tamura ², E. Sugihara ², A. Nakaya ³, Y. Nakamura ¹, H. Hirakawa ¹, S. Tabata ¹, S. Isobe ¹ (1.Kazusa DNA Res. Inst., 2.PMC, Univ. Tsukuba, 3.Grad. Sch. Front. Sci., Univ. Tokyo)

112 Long-read sequencing reveals genomic structural variations in monosomic alien chromosome addition lines in rice

☆Hosaka, A. ¹, A. Mayumi ¹, H. Yasui ², K. Nonomura ³, H. Tsuji ¹ (1.KIBR., Yokohama City University, 2.Grad. Sch. Agric., Kyushu Univ., 3.Experimental Farm, National Institute of Genetics)

113 Identification of the causal mutation for non-shattering habit in a rice (*Oryza sativa* L.) cultivar 'Minamiyutaka' using whole-genome mutation detection

☆Li, F. ¹, A. Komatsu ², M. Ohtake ², A. Shimizu ¹, H. Eun ³, H. Kato ⁴ (1.Institute of Crop Sciences, NARO, 2.Inst. Agrobiol. Sci., NARO, 3.Inst. Agro-Environ. Sci., NARO, 4.Genet. Resour. Cent., NARO)

114 CRISPR/Cas9-mediated knockout of OsDRP3A involving in mitochondrial fission

☆Sekine, S., K. Toriyama (Grad. Sch. Agri. Sci., Tohoku Univ.)

115 Genotype and environmental interaction in heading date revealed by evaluation of rice MAGIC population under different locations

○Yamamoto, T. ¹, K. Kashihara ¹, T. Furuta ¹, D. Ogawa ², Y. Nonoue ², H. Tsunematsu ², J. Yonemaru ² (1.IPSR, Okayama University, 2.Institute of Crop Science, NARO)

116 Identification of the causal gene for early flowering wheat mutant using whole genome sequencing

☆Komura, S. ¹, F. Kobayashi ², Y. Ohno ², H. Handa ^{2,3}, K. Yoshida ¹ (1.Grad. Sch. Agri. Sci., Kobe Univ., 2.NICS, NARO, 3.Grad. Sch. Life Envi. Sci., Kyoto Pref. Univ.)

117 de novo genome assembly of a Japanese wheat cultivar Norin 61 in the international wheat 10+ genomes project

○Shimizu, K. ^{1,2}, H. Handa ^{3,4}, S. Nasuda ⁵, J. Sese ^{6,7}, K. Kawaura ¹, H. Tsuji ¹, T. Tameshige ¹, T. Ban ¹, C. Dario ², M. Hatakeyama ^{2,8}, R. Shimizu-Inatsugi ², A. Catharine ⁸, F. Kobayashi ³, J. Gutierrez-Gonzalez ⁹, N. Stein ¹⁰, E. Delorean ¹¹, T. Paape ², G. Halstead-Nussloch ², G. Haberer ¹², M. Spannagl ¹², K. Mayer ¹², M. Mascher ¹⁰, A. Himmelbach ¹⁰, S. Padmarasu ¹⁰, T. Wicker ¹³, C. Pozniak ¹⁴ (1.Kihara Inst. Biol. Res., Yokohama City Univ., 2.Dept. Evol. Biol. Env. Sci, Univ. Zurich, 3.Inst. Crop Sci., NARO, 4.Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., 5.Grad. Sch. Agr., Kyoto Univ., 6.AIST, 7.Humanome Lab., 8.Func. Genom. Cent. Zurich, 9.Dept. Agr. Plant Genet., Univ. Minnesota, 10.IPK, 11.Dept. Plant Path., Kansas State Univ., 12.Helmholtz Zentrum Muenchen, 13.Dept. Plant Microb. Biol., Univ. Zurich, 14.Crop Dev. Center, Univ. Saskatchewan)

118 Structural analysis of the Gli-2 loci for alpha-gliadin in cultivars of the international wheat 10+ genomes project

○Handa, H. ^{1,2}, K. Shimizu ^{3,4}, H. Gwyneth ⁴, T. Tanaka ², P. Timothy ⁴, C. Dario ⁴, F. Kobayashi ², M. Hatakeyama ^{4,5}, H. Kanamori ², J. Wu ², K. Kawaura ³, C. Pozniak ⁶ (1.Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., 2.Inst. Crop Sci., NARO, 3.Kihara Inst. Biol. Res., Yokohama City Univ., 4.Dept. Evol. Biol. Env. Sci, Univ. Zurich, 5.Func. Genom. Cent. Zurich, 6.Crop Dev. Center, Univ. Saskatchewan)

201 Expression analysis of newly emerged *orf* by TALEN-based mitochondrial genome editing in RT102-type cytoplasmic male sterile rice

☆Omukai, S. ¹, K. Toriyama ¹, S. Arimura ², T. Kazama ^{1,3} (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.Grad. Sch. Agri. Life Sci., Univ. Tokyo, 3.Fac. Agri., Kyushu Univ.)

202 Genetic analysis of the mutant showing zebra chlorosis and tillering dwarf in rice

☆Ikeda, S. ¹, J. Garcon ², M. Nagai ², T. Kawashima ¹, T. Ito ³, Y. Koide ¹, I. Takamure ^{1,2} (1.Grad. Sch. Agri., Hokkaido Univ., 2.Grad. Sch. Global Food Resources, Hokkaido Univ., 3.Fac. Agri., Hokkaido Univ.)

203 The regulatory mechanism of initiation of rice internode elongation

☆Nagai, K. ¹, Y. Mori ¹, S. Ishikawa ¹, R. Gamuyao ¹, Y. Niimi ¹, T. Hobo ¹, M. Fukuda ¹, H. Sakakibara ^{1,6}, T. Furuta ², H. Hisano ², K. Sato ², T. Akagi ³, A. Yoshida ⁴, H. Tsuji ⁴, Y. Sato ⁵, M. Kojima ⁶, Y. Takebayashi ⁶, A. Fukushima ⁶, Y. Himuro ^{6,7}, M. Kobayashi ⁷,

J. Wu ⁸, W. Ackley ⁸, M. Ashikari ¹ (1.Nagoya Univ., 2.Okayama Univ. Institute of Plant Science and Resources, 3.Okayama Univ. Graduate School of Environmental and Life Science, 4.Yokohama City Univ. Kihara Institute, 5.NIG, 6.RIKEN CSRS, 7.RIKEN BioResource Center, 8.NARO)

204 GWAS identified *qWT1* acting as a leaf derived signal to determine the phenotypic diversity of grain size among Asian wild rice (*Oryza rufipogon*)

○Ta, K. ¹, S. Shimizu-Sato ¹, K. Taoka ², H. Tsuji ², T. Akagi ³, Y. Tanizawa ¹, R. Sano ⁴, M. Nosaka-Takahashi ¹, T. Suzuki ¹, T. Demura ⁴, A. Toyoda ¹, Y. Nakamura ¹, Y. Sato ¹ (1.National Institute of Genetics, 2.KIBR., Yokohama City University, 3.Grad. Sch. Env. Live Sci., Okayama Univ., 4.NAIST., Ikoma)

205 Epigenetic suppression of the autonomous transposable element *Ping* in tropical *japonica* rice

Inada, R. ¹, ☆S. Yoshinaga ¹, S. Teramoto ², Y. Okumoto ³, T. Tanisaka ⁴, T. Tsukiyama ^{1,5} (1.Grad. Sch. Agr., Kindai Univ., 2.Inst. Crop Sci., NARO, 3.Fac. Agr., Setsunan Univ., 4.Fac. Agr., Kibi Int. Univ., 5.Fac. Agr., Kindai Univ.)

206 Enzymatic properties of rice class IV chitinase isozymes

☆Yoo, C. ¹, K. Inouye ², T. Yoshikawa ², T. Tsukiyama ^{1,3} (1.Grad. Sch. Agr., Kindai Univ., 2.Grad. Sch. Agr., Kyoto Univ., 3.Fac. Agr., Kindai Univ.)

207 Roles of the sodium transporter, SvHKT1;1, in salt tolerance of *Sporobolus virginicus*

○Tada, Y. ¹, Y. Kawakami ¹, S. Imran ², M. Katsuhara ² (1.School of Bioscience and Biotechnology, Tokyo University of Technology, 2.Institute of Plant Science and Resources, Okayama University)

208 Isolation and functional analysis of the soybean early leaf senescence gene ELS1

☆Yamatani, H. ^{1,2}, H. Titnarong ¹, T. Yamada ³, M. Kusaba ², A. Kaga ¹ (1.NARO, NICS, 2.Grad. Sch. Int. Sci. Life, Univ. Hiroshima, 3.Grad. Sch. Agr, Univ. Hokkaido)

209 Identification of a gene responsible for changing the ratio between glycosylated and malonylated form of isoflavones in soybean seed

○Watanabe, S., R. Yamada, R. Sarkar, T. Anai (Fac. Agri., Univ. Saga)

210 Analysis of *isoflavone synthase* mutant in soybean

○Yoshikawa, T. ¹, K. Yabe ², M. Teraishi ¹, T. Anai ³, Y. Okumoto ⁴ (1.Grad. Sch. Agr. Kyoto Univ., 2.Fac. Agr. Kyoto Univ., 3.Saga Univ., 4.Fac. Agr. Setsunan Univ.)

211 Effects of *pat-k*, a parthenocarpic gene of tomato, on sugar metabolism in its fruit

☆Fukudome, C. ¹, R. Takisawa ², E. Maai ¹, K. Motoki ¹, K. Nishimura ¹, R. Nakano ¹, T. Nakazaki ¹ (1.Grad. Sch. Agri., Kyoto Univ., 2.Fac. Agri., Ryukoku Univ.)

212 Genome-wide survey of cis-motifs responsible for fruit ripening in kiwifruit

☆Kuwada, E. ¹, N. Fujita ², K. Takeshita ³, K. Ushijima ², Y. Kubo ², S. Uchida ³, T. Akagi ² (1.Fac. Agric., Okayama Univ., 2.Grad. Sch. Environ. Life Sci., Okayama Univ., 3.Grad. Sch. Info. Sci. Electr. Eng., Kyushu Univ.)

213 Induction of chromosomal rearrangements using genome editing in *Arabidopsis thaliana*

Minami, S. ¹, H. Watanabe ², S. Ohbu ², T. Abe ², ○Y. Kazama ^{1,2} (1.Fac. Biosci. Biotech. Fukui Pref. Univ., 2.RIKEN Nishina Cent.)

214 Effect of HISTONE DEACETYLASE 6 (HDA6) on heterosis in *Arabidopsis thaliana*

☆Murakami, T., T. Yasuda (Takasaki), R. Fujimoto (Grad. Sch. Agri., Univ. Kobe)

215 Molecular mechanism of hybrid vigour by Methyltransferase 1 in *Arabidopsis thaliana*

☆Yamashita, M., T. Yasuda (Takasaki), R. Fujimoto (Grad. Sch. Agri., Univ. Kobe)

216 Targeted gene disruption and functional analysis of *NAD7* gene in *Arabidopsis thaliana* mitochondrial genome by mitoTALEN

☆Ayabe, H., T. Hidaka, Y. Tamura, N. Tsutsumi, S. Arimura (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

217 Chromosomal fragmentation and rearrangement induced by Ar/Fe ion-beam irradiation in *Parachlorella kessleri*

☆Ishii, K. ¹, Y. Kazama ², M. Asano ³, T. Abe ¹, S. Kawano ^{3,4} (1.RIKEN Nishina Cent., 2.Fac. Biosci. Biotech., Fukui Pref. Univ., 3.Dep. Integ. Biol. Sci., Grad. Sch. Front. Sci.,

301 Mitochondrial property of Arabidopsis calli

☆Nakazato, I., S. Arimura (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

302 Analysis of the candidate gene that controls the pericarp thickness of Tartary-buckwheat

☆Fukuie, Y. ¹, H. Shimoyama ², T. Morishita ³, D. Tsugama ⁴, K. Fujino ¹ (1.Grad. Sch. Agri., Hokkaido Univ., 2.ASAFAS., Univ. Kyoto, 3.Inst. Crop. Sci., NARO, 4.ANESC., Univ. Tokyo)

303 Two *FON* genes play different roles in axillary bud formation in rice

☆Tanaka, W. ¹, H. Hirano ² (1.Grad. Sch. Integr. Sci. Life, Hiroshima Univ., 2.Grad. Sch. Sci., Univ. Tokyo)

304 Computational modeling of radial plant type forming in wild rice

☆Tokuyama, Y. ¹, K. Ohnishi ², Y. Koide ³ (1.Graduate School of Agriculture, 2.Obihiro University of Agriculture and Veterinary Medicine, 3.Research Faculty of Agriculture, Hokkaido University)

305 Correlation between seed longevity and RNA integrity in the embryos of rice seeds

☆Saighani, K. ¹, D. Kondo ¹, N. Sano ², K. Murata ³, T. Yamada ¹, M. Kanekatsu ¹ (1.Uni. Grad. Sch. Agr., Tokyo Univ. Agr. Tec., 2.INRA. IJPB. France, 3.Toyama Pref. Agr. Fores. Fish. Res. Cent.)

306 Functional analysis of *BABY BOOM* genes in the establishment of body axes in rice embryogenesis

☆Tezuka, T. ¹, S. Shimizu-Sato ², M. Nosaka-T ^{1,2}, T. Suzuki ^{1,2}, Y. Sato ^{1,2} (1.Sch. Life Sci., Grad. Univ. Adv. Study/SOKENDAI, 2.Plant Genet., Natl. Inst. Genet.)

307 Analysis of abnormal cell division 1 mutant showing defects in both division and differentiation of endosperm cells in rice

☆Suzuki, T. ¹, K. Izawa ², Y. Takafuji ², T. Hattori ², M. Nosaka ¹, K. Ta ¹, S. Sato-Shimizu ¹, Y. Sato ¹ (1.National Institute of Genetics, 2.Graduate School of Bioagricultural Sciences, Nagoya University)

308 Polyploid-specific reinvention of hermaphroditism in persimmon is triggered by stress-induced NGATHA

☆Masuda, K., K. Ushijima, Y. Kubo, T. Akagi (Grad. Sch. Environ. Life Sci., Okayama Univ.)

309 The extract of galling aphid “*Schlechtendalia chinensis*” enables long term maintenance of “*Nicotiana tabacum*” cultures

☆Yamamoto, K., M. Ishigami, E. Sasatani, M. Ohtsubo, T. Hirano, M. Sato, I. Ohshima, N. Ohtsubo (Graduate School of Life and Environmental Sciences Kyoto Prefectural University)

310 Mapping of *qIF1*, a QTL for days to flowering of morning glory and 24h expression of *InCO*, a candidate gene of *qIF3*

☆Keeranon, S. ¹, H. Katsuyama ¹, M. Ono ², T. Kuboyama ¹ (1.Graduate School of Agriculture, Ibaraki University, 2.Graduate school of Life and Environmental Science, Tsukuba University)

311 Genetic analysis of barley mutants defective in starch grain morphologies in endosperm

○Matsushima, R. ¹, H. Hisano ¹, S. Miura ², Y. Hosaka ², N. Oidome ², R. Takahashi ², N. Fujita ², K. Sato ¹ (1.Institute of Plant Science and Resources, Okayama University, 2.Department of Biological Production, Akita Prefectural University)

312 Detection of novel heading-time related QTLs carried by “Kashimamugi” × “Ishukushirazu” RILs in barley

○Nishida, H. ¹, M. Sato ², S. Yokota ¹, E. Aoki ³, K. Kato ¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.Fac. Agr., Okayama U., 3.NICS)

313 Heading date of a rice cultivar, Taichung 65 is altered by day length conditions in basic vegetative phase

☆Abe, M. ¹, H. Kokaji ¹, H. Saito ², K. Nishimura ¹, A. Shimizu ³, H. Nakagawa ⁴, S. Yabe ⁵, R. Nakano ¹, E. Maai ¹, K. Motoki ¹, A. Nagano ⁶, T. Nakazaki ¹ (1.Grad. Sch. Agri., Univ. Kyoto, 2.Int'l. Agri. Sci., JIRCAS, 3.Sch. Enviro. Sci., Univ. Shiga Pref, 4.NARO/NIAES, 5.Inst. Crop. Sci., NARO, 6.Sch. Agri., Univ. Ryukoku)

314 Analysis of flowering-related genes expression in all leaves and all leaf stage of rice

☆Yoshida, A. ¹, A. Hosaka ¹, A. Yoshida ^{1,2}, H. Tsuji ¹ (1.Yokohama City University Kihara Institute for Biological Research, 2.Tokyo University of Agriculture and Technology)

315 Epigenomic interaction among the shoot apical meristem and germ cells in rice

Higo, A., N. Saihara, ○H. Tsuji (Kihara Inst. Biol. Res., Yokohama City Univ.)

316 A biochemical approach to identify co-regulatory proteins that interact with florigen activation complex

☆Funayama, E., K. Taoka, H. Tsuji (Kihara Institute for Biological Research, Yokohama City University)

317 Analysis of radial oxygen loss (ROL) and aerenchyma formation in lateral roots of rice

☆Noorrohmah, S., H. Takahashi, M. Nakazono (Grad. Sch. Bioagri. Sci., Nagoya University)

401 An improved pollen number counting method using a cell counter and mesh columns

☆Kakui, H. ¹, E. Tsurisaki ², H. Sassa ³, Y. Moriguchi ¹ (1.Grad. Sch. Sci. Tech., Niigata Univ., 2.Fac. Agr., Niigata Univ., 3.Grad. Sch. Hort., Chiba Univ.)

402 ORF687 encoded by the fertility restorer gene of the Ogura male sterility binds to the coding region of *orf138* and suppresses the translation

○Yamagishi, H. ¹, M. Jikuya ¹, K. Okushiro ¹, A. Hashimoto ², A. Fukunaga ¹, M. Takenaka ³, T. Terachi ¹ (1.Fac. Life Sci., Kyoto Sangyo Univ., 2.R. C. of Botany, Kyoto Sangyo Univ., 3.Grad. Sch. Sci., Kyoto Univ.)

403 Exploration for a mitochondrial candidate gene causing cytoplasmic male sterility derived from *Oryza sativa* cv. Tadukan

☆Takatsuka, A. ¹, K. Toriyama ¹, T. Kazama ² (1.Grad. Sch. Agr. Sci., Tohoku Univ., 2.Fac. Agr., Kyushu Univ.)

404 A2 fusion rice—Fertile interspecific hybrid rice between Asian and African cultivated rice—

☆Kitajima, K. ¹, I. Masuda ¹, N. Saito ¹, D. Kuniyoshi ¹, Y. Kanaoka ¹, I. Takamura ^{1,2}, Y. Hoshino ³, Y. Koide ¹, Y. Kishima ¹ (1.Research Faculty of Agriculture, Univ. Hokkaido, 2.Grad. Sch. GLOBAL FOOD RESOURCES, Univ. Hokkaido, 3.Field Sci. Northern Biosphere, Univ. Hokkaido)

405 Genetic diversity of African wild rice at the edge of its distribution in Ethiopia

Tadesse, M. ¹, K. Tanaka ², O.R. Ishikawa ² (1.Fogera National Rice Res. Training Cent., Ethiopian Inst. of Agr. Res., 2.Fac. Agri. and Life Sci. Hirosaki Univ.)

406 Morphological, physiological and genetic diversity in Oceanian AA-genome wild rice

☆Hagiyama, Y. ¹, T. Sato ², R. Henry ³, T. Kuboyama ⁴, S. Taura ⁵, R. Ishikawa ⁶, K. Ichitani ⁷ (1.Grad. Sch. Agr. Forest. Fish., Kagoshima Univ., 2.Grad. Sch. Agr., Tohoku Univ., 3.Univ. of Queensland, 4.Col. Agr., Ibaraki Univ., 5.Inst. Gene Res., Kagoshima Univ., 6.Fac. Agr. and Life Sci., Hirosaki Univ., 7.Fac. Agr., Kagoshima Univ.)

407 Segregation distortion around a gene conferring large grain size derived from an Australian wild rice strain

☆Katano, K. ¹, T. Mishimaki ², S. Taura ³, R. Henry ⁴, R. Ishikawa ⁵, K. Ichitani ⁶ (1.Grad. Sch. Agr. Forest. Fish., Kagoshima Univ., 2.Fac. Agr. and Life Sci., Hirosaki Univ., 3.Inst. Gene Res., Kagoshima Univ., 4.Univ. of Queensland, 5.Fac. Agr. and Life Sci., Hirosaki Univ., 6.Fac. Agr., Kagoshima Univ.)

408 Artificial selections from the past to the future

○Fujino, K. (NARO)

409 History of rice breeding supposed by genome diversity analysis

○Shirasawa, K. ¹, Y. Kawahara ², K. Koyanagi ³, K. Fujino ² (1.Kazusa DNA Res. Inst., 2.NARO, 3.Hokkaido U.)

410 History of phenotypic improvement for stable rice cultivation in Hokkaido

☆Ikegaya, T., K. Fujino (Hokkaido Agr. Res. Cent., NARO)

411 Environmental responsiveness of extremely early heading rice cultivars

☆Fujimura, K. ¹, A. Abe ², S. Kanda ³, S. Matsuba ⁴, K. Fujino ⁴ (1.TARC/NARO, 2.IBRC, 3.AITC, 4.HARC/NARO)

412 QTL analysis for anther length found in Australian wild rice and effects on phenotypes

☆Mishimaki, T. ¹, K. Katano ², K. Ichitani ², H. Robert ³, R. Ishikawa ¹ (1.Fac. Agri and Life Sci. Hirosaki Univ., 2.Fac. Agr. Kagoshima Univ., 3.QAFFI, University of Queensland)

413 Comparison of genetic diversity based on chloroplast polymorphisms between Japanese feral *Brassica napus* and genetic resource

☆Yanagi, E. ¹, M. Oshima ², R. Chen ², M. Tsuda ³, R. Ohsawa ² (1.Grad. Sch. Life & Env. Sci., Univ. Tsukuba, 2.Faculty. Life & Env. Sci., Univ. Tsukuba, 3.T-PIRC, Univ. Tsukuba)

414 Usefulness and utilizations of tomato bioresources developed from model experimental cultivar "Micro-Tom"

☆Sugimoto, K. ¹, Y. Shinozaki ¹, N. Ito ¹, T. Ariizumi ¹, N. Fukuda ¹, K. Aoki ², K. Yano ³, H. Ezura ¹ (1.T-PIRC, Univ. Tsukuba, 2.Grad. Sch. Life Envi. Sci., Osaka Pref. Univ., 3.Grad. Sch. Agri., Meiji Univ.)

415 Genetic diversity analysis and selection of core collection candidates based on genome-wide GBS-SNPs in melon genetic resources

☆Shigita, G. ^{1,2}, T. Phuong Dung ¹, M. Pervin ¹, O. Nnennaya Imoh ¹, Y. Monden ¹, H. Nishida ¹, K. Tanaka ³, M. Sugiyama ⁴, Y. Kawazu ⁴, K. Kato ¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.TUM, 3.Fac. Agr. Life Sci., Hirosaki U., 4.NIVFS)

416 Vietnamese melon landraces consisted of two genetic groups

Thuy, D. ¹, T. Dung ³, K. Tanaka ², P. Nhi ¹, G. Shigita ³, O. Imoh ³, H. Nishida ³, ○K. Kato ³ (1.Hue University of Agriculture and Forestry, 2.Fac. Agr. Life Sci., Hirosaki U., 3.Grad. Sch. Environ. Life Sci., Okayama U.)

417 Genetic structure analysis of Japanese tea landraces based on genome-wide SNPs

☆Yamashita, H. ^{1,2}, H. Katai ³, A. Nagano ⁴, Y. Nakamura ⁵, A. Morita ², T. Ikka ² (1.Uni. Agr., Gifu Univ., 2.Fac. Agr., Shizuoka Univ., 3.Tea Res. Cent., Shizuoka Pref., 4.Fac. Agr., Ryukoku Univ., 5.Sch. Food and Nutr. Sci., Univ. Shizuoka)

418 Impacts of interspecific introgression in the evolution of Japanese apricot

☆Numaguchi, K. ^{1,2}, T. Akagi ³, Y. Kitamura ¹, R. Ishikawa ², T. Ishii ² (1.Japanese Apricot Lab., Wakayama Fruit Tree Exp. Sta., 2.Grad. Sch. Agr. Sci., Kobe Univ., 3.Grad. Sch. Env. Life Sci., Okayama Univ.)

501 Development of advanced backcrossed lines for elucidating genetic factors of "Takanari"-type canopy structure

○Tanaka, J. ¹, D. Watanabe ², H. Ishikawa ^{2,3}, S. Adachi ², K. Hori ¹ (1.Inst. Crop. Sci., NARO, 2.Col. Agr., Ibaraki U., 3.Plant Biotech. Inst., Ibaraki Agri. Cent.)

502 Genetic analysis of panicle exertion length in chromosomal segment substitution lines (CSSLs) and their progeny populations of Takanari and Koshihikari

○Kondo, K. ^{1,2}, S. Adachi ^{1,3}, T. Takai ^{1,4}, K. Hori ^{1,5} (1.NIAS, 2.Research Institute of Rice Production & Technology Co., Ltd., 3.Col. Agr., Ibaraki U., 4.JIRCAS, 5.NICS)

503 Diverse panicle architecture results from various combinations of *Pr15/ GA20ox4* and *Pbl6/ APO1* alleles

☆Agata, A. ^{1,2}, K. Ando ¹, S. Ota ¹, M. Kojima ³, Y. Takebayashi ³, S. Takehara ⁴, K. Doi ¹, M. Ueguchi-Tanaka ⁴, T. Suzuki ⁵, H. Sakakibara ^{1,3}, M. Matsuoka ⁴, M. Ashikari ⁴, Y. Inukai ⁶, H. Kitano ⁴, T. Hobo ⁴ (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.National Institute of Genetics, 3.RIKEN., 4.Biosci. Biotec. Ctr., Nagoya U., 5.Grad. Sch. Biosci. Biotech., Chubu U., 6.ICCAE, Nagoya U.)

504 Analysis of genes regulated by *Pr15/GA20ox4* and *Pbl6/APO1* that are involved in the diverse panicle architecture in rice

○Hobo, T. ¹, A. Agata ^{2,3}, A. Ando ², S. Ota ², M. Kojima ⁴, Y. Takebayashi ⁴, S. Takehara ¹, K. Doi ², M. Ueguchi-Tanaka ¹, T. Suzuki ⁵, H. Sakakibara ⁴, M. Matsuoka ¹, M. Ashikari ¹, Y. Inukai ⁶, H. Kitano ¹ (1.Biosci. Biotec. Ctr., Nagoya U., 2.Grad. Sch. Bioagr. Sci., Nagoya U., 3.National Institute of Genetics, 4.RIKEN, 5.Grad. Sch. Biosci. Biotech., Chubu U., 6.ICCAE, Nagoya U.)

505 Analysis of ultra-high molecular weight protein complexes in rice developing endosperm lacking starch synthase IIa and starch branching enzyme IIb activities

☆Ida, T. ¹, N. Crofts ¹, S. Miura ¹, Y. Hosaka ¹, R. Matsushima ², N. Fujita ¹ (1.Fac. Biores., Akita Pref. Univ., 2.IPSR., Okayama Univ.)

506 Seed morphology, fertility rate and starch structure in rice starch branching enzyme mutants lacking two out of three isozymes

☆Miura, S. ¹, N. Crofts ¹, R. Morita ², Y. Hosaka ¹, N. Oitome ¹, Y. Nakaizumi ¹, M. Abe ¹, N. Fujita ¹ (1.Facult. Biores., Akita Pref. Univ., 2.Grad. Sch. Agri. Sci., Tokyo Univ.)

507 The characteristics of a high-resistant starch rice cultivar, 'Manpukusurari' and its applications

○Fujita, N. ^{1,2}, N. Crofts ¹, S. Miura ^{1,2}, Y. Hosaka ¹, N. Oitome ¹, T. Kawamoto ³, K. Kato ³, R. Takahashi ³, R. Takahashi ³, M. Ono ^{1,2}, Y. Nakamura ^{1,2} (1.Facul. Biores. Sci., Akita Pref. Univ., 2.Starch Technologies Co., LTD., 3.Akita Pref. Agric. Exp. Sta.)

508 QTL for root hair length on chromosome 2A identified using backcross inbred lines derived from Spanish spelt wheat

Okano, N. ¹, R. Goto ¹, T. Kato ², D. Saisho ³, K. Kato ⁴, H. Miura ¹, M. Tani ¹, ○K. Onishi ¹ (1.Obihiro U., 2.Tokyo U. Agric., 3.IPSR, Okayama U., 4.Grad. Sch. Environ. Life Sci., Okayama U.)

509 Growth characteristics and varietal differences in barley under indoor cultivation system with 'Speed Breeding' condition

☆Shimizu, H., G. Ishikawa, E. Aoki, T. Tonooka (Inst. Crop. Sci., NARO)

510 Genetic factors controlling annual deviation of heading in barley genetic resources

○Sato, K. ¹, M. Ishii ¹, K. Mochida ^{1,2} (1.IPSR, Okayama Univ., 2.CSRS, RIKEN)

511 Head and anthesis detection for wheat grown at high densities use photography and deep learning

☆Guo, W. ¹, S. Nasuda ², K. Kuroki ¹, H. Wang ¹, T. Tameshige ⁴, K. Shimizu ^{3,4}, Y. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Grad. Sch. Agric., Kyoto Univ., 3.Univ. Zurich, Dept. Evol. Biol. Env. Sci., 4.Kihara Inst. Biol. Res, Yokohama City Univ.)

512 Detection of canopy wilting in soybean via deep learning: a screening tool for precision phenotyping

☆Imachi, Y. ¹, Y. Toda ¹, G. Sasaki ¹, Y. Omori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, Y. Sawada ⁵, H. Kajiya-Kanegae ⁶, H. Tsujimoto ², A. Kaga ⁷, M.

Nakazono ³, T. Fujiwara ¹, H. Iwata ¹, W. Guo ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Arid Land Res. Ctr., Tottori Univ., 3.Grad. Sch. Bioagri. Sci., Nagoya Univ., 4.T-PIRC, Univ. Tsukuba, 5.Ctr. for Sustainable Resource Sci., RIKEN, 6.Res. Ctr. for Agr. Info. Tech., NARO, 7.Inst. Crop Sci., NARO)

513 Development of a prediction model based on marker genotype and a growth model: an application to soybean canopy area measured by UAV

☆Toda, Y. ¹, G. Sasaki ¹, Y. Omori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, Y. Sawada ⁵, H. Kajiyama-Kanegae ⁶, L. Raul ⁷, H. Tsujimoto ², A. Kaga ⁸, M. Nakazono ³, T. Fujiwara ¹, F. Baret ⁷, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Arid Land Res. Ctr., Tottori Univ., 3.Grad. Sch. Bioagri. Sci., Nagoya Univ., 4.T-PIRC, Univ. Tsukuba, 5.Ctr. for Sustainable Resource Sci., RIKEN, 6.Res. Ctr. for Agr. Info. Tech., NARO, 7.INRA EMMAH, 8.Inst. Crop Sci., NARO)

514 Deep learning for prediction of soybean biomass based on UAV remote sensing images

☆Okada, M. ¹, C. Barras ¹, Y. Toda ¹, Y. Oomori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, M. Hirai ⁵, H. Tsujimoto ², A. Kaga ⁶, M. Nakazono ³, T. Fujiwara ¹, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Arid Land Res. Ctr., Tottori Univ., 3.Grad. Sch. Bioagri. Sci., Nagoya Univ., 4.T-PIRC, Univ. Tsukuba, 5.Ctr. for Sustainable Resource Sci., RIKEN, 6.Inst. Crop Sci., NARO)

515 Simple method to measure the germination ability of rice seeds based on the respiratory activity and its application to the evaluation of seed longevity

☆Yoshida, Y., M. Nosaka, T. Suzuki, K. Ta, S. Shimizu-Sato, A. Agata, T. Tezuka, Y. Sato (NIG)

516 Effect of radial oxygen loss barrier in *Zea nicaraguensis* to drought stress

☆Suzuki, D. ¹, F. Gong ², M. Nakata ¹, H. Takahashi ¹, F. Oomori ³, Y. Mano ³, M. Nakazono ¹ (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Fac. Biores. Sci., Akita Pref. Univ., 3.NARO Inst. Livest. Grassl. Sci.)

517 The prediction of heterosis involved in multi-way crosses in sorghum

☆Ishimori, M. ¹, H. Takanashi ¹, M. Fujimoto ¹, J. Yoneda ², H. Kajiyama-Kanegae ³, T. Tokunaga ², N. Tsutsumi ¹, H. Iwata ¹ (1.Grad. Sch. Agri. Life Sci., Univ. Tokyo, 2.Earthnote Co., Ltd., 3.Res. Cent. Agri. Info. Tech., NARO)

518 Prediction and optimization of symbiotic relationship between crops and microbiota based on hologenomic data

○Iwata, H. ¹, Y. Toda ¹, S. Kobori ², E. Shirai ², T. Sato ², K. Kumaishi ², Y. Ohmori ¹, Y. Yamasaki ³, H. Takahashi ⁴, H. Takanashi ¹, M. Tsuda ⁵, M. Hirai ⁶, H. Tsujimoto ³, A. Kaga ⁷, M. Nakazono ⁴, T. Fujiwara ¹, Y. Ichihashi ² (1.Grad. Sch. Agr. Life Sci., Univ. of Tokyo, 2.RIKEN BioResource Research Center, 3.ALRC, Tottori Univ., 4.Grad. Sch. Bioagri. Sci., Nagoya Univ., 5.T-PIRC, Univ. Tsukuba, 6.CSRS, RIKEN, 7.NICS, NARO)

601 Battle over anthocyanin between Brassicaceae plants and Turnip mosaic virus

○Inukai, T. ¹, A. Murakami ², W. Matsunaga ¹, C. Masuta ¹ (1.Res. Fac. Agr., Hokkaido Univ., 2.Fac. Agr., Hokkaido Univ.)

602 A novel facultative parthenocarpic tomato mutant shows improved fruit-set by parthenocarpy in summer while produced fruits with seeds in other seasons

☆Fujita, S. ¹, H. Ezura ² (1.Grad. Sch. Life and Environmental Sci., Univ. of Tsukuba, 2.Faculty of Life and Environmental Sci., Univ. of Tsukuba)

603 QTL analysis of the root tissue size in sorghum using recombinant inbred lines

☆Yamauchi, T. ^{1,2}, H. Takanashi ², M. Fujimoto ², A. Nishimura ², H. Kanegae ³, K. Yano ⁴, H. Iwata ², W. Sakamoto ⁵, N. Tsutsumi ² (1.JST., PRESTO., 2.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 3.RCAIT., NARO., 4.Grad. Sch. Agric., Meiji Univ., 5.Inst. Plant Sci. Resources, Okayama Univ.)

604 Identification of a gene controlling radial oxygen loss barrier formation in roots of *Zea mays*

☆Nakayama, Y. ¹, K. Watanabe ¹, K. Ide ¹, Y. Kurokawa ¹, H. Takahashi ¹, F. Omori ², Y. Mano ², M. Nakazono ¹ (1.Grad. Sch. Bioagri. Sci., Univ. Nagoya, 2.Inst. Livest. Grassl. Sci., NARO)

605 Characterization of salt tolerance-related genes in synthetic wheat

Nakayama, R. ¹, K. Sato ², N. Yamaji ², ○K. Kawaura ¹ (1.KIBR, Yokohama City Univ., 2.IPSR, Okayama Univ.)

606 The screening of genes that show insensitivity to low temperature during rice booting stage

☆Yamamori, K. ¹, S. Ishiguro ¹, K. Ogasawara ¹, Y. Koide ¹, K. Hujino ¹, Y. Sato ², Y. Kishima ¹ (1.Grad. Sch. Agr., Univ. Hokkaido, 2.NARO-HARC)

607 A QTL for *SOIL SURFACE ROOTING* (*qSOR1*) belongs to an important gene family controlling root system architecture in rice

○Uga, Y. ¹, Y. Kitomi ¹, E. Hanzawa ², N. Kuya ¹, H. Inoue ³, N. Hara ³, S. Kawai ¹, N. Kanno ¹, M. Endo ³, K. Sugimoto ¹, T. Yamazaki ⁴, S. Sakamoto ⁵, N. Sentoku ³, J. Wu ¹, N. Mitsuda ⁵, T. Sato ⁶ (1.NICS, 2.Grad. Sch. Life Sci., Tohoku Univ., 3.NIAS, 4.NAAC, 5.Bioprod. Res. Inst., AIST, 6.Grad. Sch. Agr., Tohoku Univ.)

608 A QTL for *SOIL SURFACE ROOTING 1* (*qSOR1*) improve rice yields with avoiding reduction soil in saline paddy fields

○Sato, T. ¹, E. Hanzawa ², Y. Kitomi ³, H. Kanno ¹, K. Toriyama ¹, Y. Uga ³ (1.Grad. Sch. Agr., Tohoku Univ., 2.Grad. Sch. Life Sci., Tohoku Univ., 3.Inst. Crop. Sci., NARO)

609 Bacterial blight resistance conferred by a missense mutation in Kas-II gene in rice

☆Gatayama, Y. ¹, C. Busungu ², S. Taura ³, D. Toyomoto ⁴, T. Anai ⁵, A. Suzuki ⁵, T. Uchiumi ⁶, K. Shimizu ⁷, S. Okamoto ⁷, K. Shimizu ⁷, K. Ichitani ⁷ (1.Grad. Sch. Agr. Forest. Fish., Kagoshima Univ., 2.Fac. Business, St. Augustine Univ. of Tanzania, 3.Inst. Gene Res., Kagoshima Univ., 4.United Grad. Sch. Agr. Sci., Kagoshima Univ., 5.Fac. Agr., Saga Univ., 6.Grad. Sch. Sci. Tech., Kagoshima Univ., 7.Fac. Agr., Kagoshima Univ.)

610 Genic analysis of phosphorus deficiency tolerance and phosphorus mobilization using ICP-AES in rice

☆Dinh, T. ^{1,2}, N. Kobayashi ³, C. Kato ⁴, R. Ishikawa ⁴ (1.UGAS, Iwate Univ., 2.IAS, 3.Inst. Crop Sci. NARO, 4.Fac. Agri. and Life Sci. Hirosaki Univ.)

611 Evaluation of differences of diamide sensitivity among rice cultivars

○Tsukiyama, T., S. Tahara (Fac. Agr., Kindai Univ.)

612 Some of AA-genome *Oryza glumaepatula* accessions form a constitutive barrier to radial oxygen loss along roots under aerated conditions

☆Ejiri, M., Y. Sawazaki, K. Shiono (Grad. Sch. Biosci. & Biotech., Fukui Pref. Univ.)

613 Difference in the degree of seed mottling severity due to SMV among soybean cultivars in Hokkaido

Ashina, H. ¹, M. Saruta ², S. Ohnishi ³, M. Kawasaki ⁴, T. Sano ¹, O.M. Senda ¹ (1.Fac. Agric. Life Sci., Univ. Hirosaki, 2.Inst. Crop. Sci., NARO, 3.Kitami Agr. Exp. Sta., HRO, 4.Fac. Agri., Univ. Setsunan)

614 Detection and verification of resistant QTL for soybean red crown rot derived from an accession of wild soybean

○Taguchi-Shiobara, F. ¹, Y. Nanjo ¹, G. Mimuro ², A. Hishinuma ³, C. Jiang ⁴ (1.Inst. Crop Sci., NARO, 2.Toyama Pref. Agr. For. & Fis. Res. Cent., 3.Tohoku Agr. Res. Cent., NARO, 4.Inst. Agr. Sci., NARO)

615 Selection for high yield lines by measuring nitrogen uptake in soybean breeding program

○Kobayashi, S., S. Koyano (Tokachi Agricultural Experiment Station, HRO)

616 Mapping of a gene associated with efficient saccharification of rice straws

☆Ono, A., K. Ito, T. Abe, Y. Ito (Grad. Sch. Agri. Sci., Tohoku Univ.)

617 Heterosis caused by the ubiquitin-related modifier gene *Rurm1* in rice

☆Maeda, Y., T. Tsukiyama (Grad. Sch. Agr., Kindai Univ.)

618 QTL analysis for plastid-genome-copy number and fresh weight of early seedlings in the F₂ population between rice cultivars, Nipponbare and Kasalath

☆Takama, R. ¹, K. Shirasawa ², K. Ichitani ³, S. Adachi ¹, J. Tanaka ⁴, T. Kuboyama ¹ (1.Col. Agr., Ibaraki U., 2.Kazusa DNA Res. Inst., 3.Fac. Agr., Kagoshima U., 4.Inst. Crop Sci., NARO)

619 Search of conditions that increase the amount of total soluble proteins under darkness in rice seedlings

☆Watanabe, A. ¹, Y. Hatanaka ^{2,3}, Y. Takeshima ^{2,4}, K. Sasaki ^{2,5}, N. Takahashi ^{2,6}, Y. Ito ^{1,2} (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.EGGS, Tohoku Univ., 3.Takasaki Girl's High Sch., 4.Akita High Sch., 5.Renaissance High Sch., 6.Sakata Higashi High Sch.)

620 Image diagnosis of rapid softening in perssimon fruit with deep learning

☆Suzuki, M. ¹, K. Masuda ², K. Takeshita ³, H. Asakuma ⁴, T. Suzuki ⁵, M. Sugiura ⁵, T. Niikawa ⁵, S. Uchida ³, T. Akagi ² (1.Fac. Agric., Okayama Univ., 2.Grad. Sch. Environ. Life Sci., Okayama Univ., 3.Grad. Sch. Info. Sci. Electr. Eng., kyushu Univ., 4.Fukuoka Agric. For. Res. Cent, 5.Gifu Pref. Agric. Technol. Cent.)

Poster Presentations

P001-A Resistance to *M. sacchari* in sorghum

☆Omollo, E. ¹, H. Kajiya-Kanegae ², T. Takami ¹, H. Kondo ¹, N. Ohnishi ¹, H. Murage ³, I. Galis ¹, W. Sakamoto ¹ (1.Institute of Plant Science and Resources, Okayama University, 2.Research Center for Agricultural Research Center for Agricultural Information Technology, National Agriculture and Food Research Organization, 3.Jomo Kenyatta University of Science and Technology)

P002-B Interspecific hybridization between wild species and [Sadowara] egg plant, a Miyazaki prefecture original vegetable line

Yoshimura, K. ¹, ○L. Chen ^{1,2} (1.Grad. School of Hort. & Food Sci., Minami Kyushu U., 2.Fac. Envir. & Hort. Sci., Minami Kyushu U.)

P003-C Theoretical morphological analysis of floral morphology of French water lily cultivars

☆Kirie, S. ¹, C. Pradal ², H. Iwasaki ³, K. Noshita ⁴, H. Iwata ¹ (1.Grad. Sch. Agri. and Life Sci., Univ. Tokyo, 2.CIRAD, UMR AGAP & Inria, Univ. Montpellier, 3.Grad. Sch. Advanced Sci. and Engineering, Waseda Univ., 4.Grad. Sch. Sci., Kyushu Univ.)

P004-D Optimization of genomic selection breeding programs with Bayesian optimization and breeding simulations

☆Diot, J., H. Iwata (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

P005-A Simulating rice domestication using tissue-level growth modeling

○Koide, Y. (Research Faculty of Agriculture, Hokkaido University)

P006-B Regulatory Status of Genome-Edited Organisms Under the Japanese Cartagena Act

○Tsuda, M., N. Watanabe, R. Ohsawa (T-PIRC, U. of Tsukuba)

P007-C Development of transformation system for tartary buckwheat

○Miyahara, K. (Inst. Agrobio. Sci., NARO)

P008-D The initiative for promoting public understanding for the use of genome editing technique in the field of agriculture

○Takahara, M., N. Fukino, T. Akama, M. Ohta, Y. Tabei (New Tech. Promotion Office, Strategic Planning HQ, NARO)

P009-A Breeding of a new hull-less barley cultivar 'Daikinboshi' with low glassiness and high whiteness grain

☆Sugita, T. ¹, T. Yoshioka ¹, A. Takahashi ^{1,2}, T. Yanagisawa ^{1,3}, T. Nagamine ^{1,4}, T. Takayama ^{1,5} (1.WARC/NARO, 2.Headquarters/NARO, 3.NICS/NARO, 4.CARC/NARO, 5.TARC/NARO)

P010-B Estimation of genome regions controlling of germination and initial elongation at low temperature and culm length

○Yasuda, H. ¹, U. Yamanouchi ², T. Hayashi ¹ (1.Hokkaido Agri. Res. Center, NARO, 2.Inst. Crop Sci., NARO)

P011-C Relationship between culm length and emergence under low temperature by dry seedling of Hokkaido varieties of rice

○Hayashi, T., H. Yasuda (Hokkaido Agricultural Research Center, NARO)

P012-D Breeding of a new hull-less barley cultivar 'Haruakane' with early maturity and high yield

○Yoshioka, T. ¹, T. Sugita ¹, A. Takahashi ^{1,2}, T. Yanagisawa ^{1,3}, T. Nagamine ^{1,4}, T. Takayama ^{1,5}, Y. Doi ¹ (1.WARC/NARO, 2.Headquarters/NARO, 3.NICS/NARO, 4.CARC/NARO, 5.TARC/NARO)

P013-A Effect of soil nutrient deficiency on the shoot and root traits of Japanese rice cultivars

☆Hasegawa, K. ¹, T. Mori ¹, M. Amano ¹, H. Takahashi ¹, S. Nishiuchi ¹, J. Murase ¹, M. Matsuoka ², M. Nakazono ¹ (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Biosci. Biotech. Cent., Nagoya Univ.)

P014-B Development of near-isogenic lines for sham ramification in spikelets in tetraploid wheat

○Watanabe, N. ¹, Y. Amagai ², P. Martinek ³ (1.The Little Nursery, 2.Env., Health & Field Sci., Chiba U., 3.Agrotest Fyto, Ltd.)

P015-C Genetic relationship of Japanese local varieties of turnip (*Brassica rapa*) revealed by SSR-markers 2. With a focus on the varieties of 'Tennoji' and 'Nozawana'

○Egashira, H., K. Yamada (Fac. Agr. Yamagata Univ.)

P016-D Genetic diversity of Italian ryegrass (*Lolium multiflorum* Lam.) cultivars and varieties based on genome-wide allele frequency

○Tamura, K. ¹, A. Arakawa ², T. Kiyoshi ¹ (1.NILGS, NARO, 2.KARC, NARO)

P017-A Genetic diversity of Japanese ramie in Showa village, Fukushima

○Takahashi, H. ¹, Y. Watanabe ¹, T. Shinoda ¹, Y. Funaki ² (1.Fac. Food Agri. Sci., Fukushima Univ., 2.Pres. Soci. Showa-mura Karamushi Prod. Tech.)

P018-B Genetic relationship of local cucumber varieties in Yamagata pref. revealed by SSR-markers

☆Amakawa, T., H. Egashira (Grad. Sch. Agr. Sci., Yamagata Univ.)

P019-C Genetic diversity of traditional eggplant cultivars in Japan and Taiwan using SSR markers

☆Nakagawa, A. ¹, H. Takahashi ², K. Ueda ³, A. Watanabe ³, H. Akagi ³, K. Sakurai ³ (1.Grad. Sch. Biores. Sci., Akita Pref. Univ., 2.Fac. Food Agri. Sci., Fukushima Univ., 3.Fac. Biores. Sci., Akita Pref. Univ.)

P020-D Digital sequence information from the viewpoint of open science and ABS in breeding research

○Machida-Hirano, R., E. Domon (Genet. Resour. Cent., NARO)

P021-A Growth Characteristics of Barley in Okinawa

○Saisho, D. ¹, Y. Okada ² (1.IPSR, Okayama Univ., 2.Kyushu Okinawa Agricultural Research Center, NARO)

P022-B Gamma-ray mutagenesis in Japanese morning glory

Okano, R., Y. Takahashi, H. Katsuyama, ○T. Kuboyama (Col. Agr., Ibaraki U.)

P023-C New spontaneous mutation of mulberry leaf morphology

○Yamanouchi, H. (Rad. Breed. Div., Inst. Crop. Sci., NARO)

P024-D Next-generation sequencing analysis of isogenic lines of Koshishikri

☆Yokoyama, T., Y. Saito, S. Makita, A. Yoshimura, M. Tomita (Research Institute of Green Science and Technology, Shizuoka University)

P025-A Intra-clonal genetic variation in 'Hiratanenashi' Nonaploid persimmon

○Nishiyama, S., S. Wang, R. Tao (Grad. Sch. Agric., Kyoto Univ.)

P026-B Evaluation of genetic diversity by resequencing of a diversity panel of African rice (*Oryza glaberrima*)

☆Hirao, A. ¹, D. Fujita ², R. Ishikawa ³, Y. Koide ⁴, H. Yasui ¹, Y. Yamagata ¹ (1.Fac. Agr., Grad. Sch., Kyushu Univ., 2.Saga Univ., 3.Grad. Sch., Agr. Sci., Kobe Univ., 4.Grad. Sch., Univ. Hokkaido)

P027-C Development of weedy rice specific marker in cpDNA

☆Muto, C. ¹, K. Eban ¹, T. Imaizumi ² (1.Genetic Resources Center, NARO, 2.Central Region Agricultural Research Center, NARO)

P028-D Sequence analysis of *SSII* gene related to lower pasting temperature in sweet potato starch

☆Tada, K. ¹, M. Tanaka ², A. Kobayashi ², Y. Monden ¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.KARC, NARO)

P029-A Searching for the genomic regions in common wheat controlling transformability by the Agrobacterium method

☆Nie, J. ¹, K. Murata ¹, H. Hisano ², F. Abe ³, S. Nasuda ¹ (1.Grad. School Agric., Kyoto Univ., 2.IPSR, Okayama Univ., 3.Inst. Crop Sci., NARO)

P030-B Construction of a linkage map and mapping of some traits in foxtail millet Recombinant Inbred Lines by Flexible ddRAD-seq

○Fukunaga, K. ¹, Y. Mukainari ¹, K. Tanaka ², A. Abe ³, H. Yaegashi ³, K. Komari ¹, M. Kawase ⁴ (1.Fac. Life and Environ., Pref. Univ. Hiroshima, 2.NODAI Genome Research Center, Tokyo Univ. Agri., 3.Iwate Biotech. Center, 4.Fac. Agr., Tokyo Univ. Agri.)

P031-C Mapping of QTLs controlling epicotyl length in adzuki bean (*Vigna angularis*)

○Mori, M. ¹, K. Maki ¹, T. Kawahata ¹, Y. Kato ¹, D. Kawahara ¹, T. Yoshida ¹, H. Nagasawa ², H. Satou ³, A. Nagano ⁴, P. Bethke ^{5,6}, K. Kato ¹ (1.Obihiro Univ., 2.Tokachi Agricultural Experiment Station, HRO, 3.Central Agricultural Experiment Station, HRO, 4.Ryukoku Univ., 5.USDA, 6.University of Wisconsin, Madison)

P032-D Genetic location and character of a QTL governing anther length, *qATL6.2*, derived from *Oryza longistaminata*, a wild species from Africa

☆Tamakoshi, Y., T. Ogami, H. Yasui, Y. Yamagata (Fac. Agr., Grad. Sch., Kyushu Univ.)

P033-A Combination of alleles derived from *Oryza sativa*, *O. nivara*, and *O. meridionalis* at *S21* for F₁ pollen sterility alter the direction of segregation distortion

☆Kubota, R., M. Sakata, R. Murakami, Y. Miyazaki, H. Yasui, A. Yoshimura, Y. Yamagata (Fac. Agr., Grad. Sch., Kyushu Univ.)

P034-B Genetic analysis of aberrant elongation of a lower internode in sorghum pollen parental lines

☆Hashimoto, S. ¹, T. Wake ¹, S. Araki-Nakamura ², M. Yamaguchi ¹, K. Ohmae-Shinohara ², S. Kasuga ³, T. Sazuka ² (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Biosci. and Biotech. Center, Nagoya Univ., 3.AFC, Fac. of Agri., Shinshu Univ.)

P035-C A novel, latent clubroot resistance locus in "nabana" (*Brassica rapa*) cultivar

☆Kitanishi, T. ¹, G. Tsuji ¹, K. Kitazawa ², S. Tokumaru ², Y. Mimura ², N. Kubo ^{1,2} (1.Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., 2.Biotechnol. Dept., Kyoto Pref. Agric. Forest. Fish. Technol. Cent.)

P036-D Characterization of homozygous recombinant lines around milling quality QTLs on 3B and 7A chromosomes in common wheat

○Ishikawa, G. ¹, F. Kobayashi ¹, M. Fujita ¹, H. Ito ², S. Ikenaga ², T. Nakamura ²
(1.Inst. Crop Sci., NARO, 2.Tohoku Agri. Res. Cent., NARO)

P037-A Resistant loci of physiological disorder cupping in Chinese Cabbage (*Brassica rapa* var. *Pekinensis*)

☆Sakaguchi, T. ¹, O. Kawaide ³, M. Nakazawa ¹, N. Ito ¹, M. Amaike ², T. Ito ⁵, H. Azuhata ³, S. Chino ⁵, H. Matsumura ⁴, S. Niikura ³, N. Hayashida ² (1.Master's Program, Shinshu University, 2.Division of Applied Biology, Faculty of Textile, Shinshu University, 3.TOHOKU SEED CO., LTD., 4.Gene Research Center, Shinshu University, 5.Engineering Department, Faculty of Textile, Shinshu University)

P038-B QTL analysis of important agronomic traits in spinach using pseudomolecules

○Onodera, Y. ¹, S. Sugiyama ², A. Toyoda ³, T. Ito ⁴, Y. Suzuki ⁵, A. Nagano ⁶, H. Hirakawa ⁷ (1.Res. Fac. Agr., Hokkaido Univ., 2.Sch. Agr., Hokkaido Univ., 3.Nat. Inst. Genet., 4.Sch. Life Sci. Tech., Tokyo Inst. Tech., 5.Grad. Sch. Front. Sci., Univ. Tokyo, 6.Fac. Agr., Ryukoku Univ., 7.Kazusa DNA Res. Inst.)

P039-C Cancelled

P040-D Segregation distortion of *FcRAN1* alleles and analysis of the genetic factors in fig (*Ficus carica* L.)

○Ikegami, H. ¹, K. Shirasawa ², H. Yakushiji ³, S. Yabe ⁴, M. Sato ², T. Hayashi ⁵, K. Tashiro ⁶, H. Nogata ¹ (1.Fukuoka Agric. Forest. Res. Cent., 2.Kazusa DNA Res. Inst., 3.Inst. Fruit Tree Tea Sci., NARO, 4.Inst. Crop Sci., NARO, 5.Res. Cent. Agric. Info. Tech., NARO, 6.Grad. Sch. Agric., Kyushu Univ.)

P041-A A rice characteristics dataset collection of past breeding for genomic prediction

○Matsushita, K. ^{1,2}, A. Onogi ^{1,2,3}, H. Kajiya-Kanegae ¹, T. Hayashi ¹, Y. Kwon ¹, H. Yasuda ⁴, H. Ohta ^{2,5}, K. Fujimura ⁵, I. Nagaoka ⁶, A. Goto ², D. Kim ^{2,6}, H. Sasahara ⁷, Y. Takeuchi ⁸, T. Ishii ², G. Kikui ¹, M. Yano ¹, J. Yonemaru ^{1,2} (1.RCAIT/NARO, 2.NICS/NARO, 3.Ryukoku Univ., 4.HARC/NARO, 5.TARC/NARO, 6.CARC/NARO, 7.WARC/NARO, 8.KARC/NARO)

P042-B Production of deletion mutant of *RsGL1* gene in *Raphanus sativus* L. using CRISPR/Cas9

☆Muto, N., K. Komatsu, T. Matsumoto (Graduate School of Agriculture, Tokyo University of Agriculture)

P043-C Elemental profiling of sorghum seeds to detect QTLs for seed quality traits

☆Wacera, F. ¹, K. Yamazaki ², T. Fujiwara ², H. Takanashi ², N. Tsutsumi ², W. Sakamoto ¹ (1.Okayama University, Institute of Plant Science and Resources, 2.The University of Tokyo)

P044-D Construction of autonomously replicating vectors for chloroplast transformation by using chloroplast DNA fragments

☆Nakamoto, K. ¹, H. Baba ¹, K. Uemura ², T. Terachi ² (1.Grad. Sch. Life Sci., Kyoto Sangyo U., 2.Fac. Life Sci., Kyoto Sangyo U.)

P045-A Functional analyses of *Oriza*;Cystatin in rice seed

☆Naya, E., T. Nishikata, R. Hatakeyama, Y. Saito (Fac. Agri., Iwate Univ.)

P046-B Functional analysis of *SLM1* gene in *Trifolium repens* L.

☆Waizumi, H., T. Tamura, Y. Saitoh (Fac. Agri., Univ. Iwate)

P047-C Functional analyses of CDK inhibitors during rice seed development

☆Takahashi, M., S. Oya, S. Miyakawa, R. Sugawara, T. Sugiyama, Y. Saitoh (Fac. Agri., Iwate Univ)

P048-D Reconsideration of de Vries' mutation theory using highly mutable tobacco plants

Tsujimura, M. ², H. Sanomine ¹, ○T. Terachi ¹ (1.Fac. Life Sci., Kyoto Sangyo Univ., 2.Fac. Agr., Ryukoku Univ.)

P049-A Agricultural characterization of newly developed wheat mutants with reduced red grain color

○Chono, M. ¹, M. Fujita ¹, N. Kohyama ¹, H. Matsunaka ², E. Himi ³, H. Ichida ⁴, T. Abe ⁴, N. Kawakami ⁵ (1.Institute of Crop Science, NARO, 2.Hokkaido Agricultural Research Center, NARO, 3.Kibi International Univ., 4.RIKEN Nishina Center, 5.Meiji Univ.)

P050-B Differences in CMV resistance among *Brassica rapa* accessions and polymorphisms of translation initiation factor *eIF4Es*

☆Tian, A., M. Yamamoto, H. Takahashi, H. Kitashiba (Grad. Sch. Agric. Sci., Univ. Tohoku)

P051-C QTL Analysis for Anthracnose Resistance in Cucumber (*Cucumis sativus* L.) by Cotyledon Assay

☆Matsuo, H. ¹, M. Sugiyama ², S. Isobe ³, K. Shirasawa ³, Y. Yoshioka ⁴ (1.Grad. Sch. Life & Env. Sci., Univ. Tsukuba, 2.Headquarters, NARO, 3.Kazusa DNA Res. Inst., 4.Fac. Life Env. Sci., Univ. Tsukuba)

P052-D Identification of blast resistance QTLs in rice cultivar "Jaguary"

☆Oikawa, K. ¹, M. Shimizu ¹, A. Abe ¹, A. Hirabuchi ¹, Y. Hiraka ¹, R. Terauchi ^{1,2} (1.Iwate Biotechnology Research Center, 2.Grad. Sch. Agr., Univ. Kyoto)

P053-A Estimation of locus region associated with susceptibility to black spot of peach

☆Asano, T. ¹, T. Kawai ¹, Y. Unoki ², S. Hihara ², D. Takata ³, K. Shirasawa ⁴, T. Akagi ¹, F. Fukuda ¹, R. Nakano ⁵, Y. Kubo ¹, M. Yamamoto ¹, K. Ushijima ¹ (1.Grad. Sch. Environ. and Life Sci., Okayama Univ., 2.Ctr. Agri., Okayama Pref., 3.Sch. Agri., Fukushima Univ., 4.Kazusa DNA Res. Inst., 5.Sch. Agri., Kyoto Univ.)

P054-B Insertion of LTR retrotransposon *Dasheng* into *PR1b* in a rice cultivar Koshihikari and distribution of the insertion mutation in Japanese rice cultivars

☆Ishihara, T., T. Inukai (Res. Fac. Agr. Hokkaido Univ.)

P055-C Prediction of soybean growth under drought based on multispectral imaging using drone and ground-level vehicle remote sensing

☆Sakurai, K. ¹, Y. Toda ¹, Y. Omori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, M. Ishimori ¹, H. Tsujimoto ², A. Kaga ⁵, M. Nakazono ³, T. Fujiwara ¹, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Arid Land Res. Ctr., Tottori Univ., 3.Grad. Sch. Bioagri. Sci., Nagoya Univ., 4.T-PIRC, Univ. Tsukuba, 5.Inst. Crop Sci., NARO)

P056-D QTL mapping of flooding tolerance at the seedling stage in barley

○Mano, Y. ¹, H. Takahashi ², F. Omori ¹, T. Komatsuda ³ (1.Inst. Livest. Grassl. Sci., NARO, 2.Fac. Food Agri. Sci., Fukushima Univ., 3.Inst. Crop Sci., NARO)

P057-A Functional analysis of lupeol synthase in soybean

☆Abo, C. ¹, T. Gorai ¹, A. Yanagawa ¹, H. Suzuki ², Y. Tomisaki ², H. Seki ², A. Kaga ³, T. Muranaka ², M. Nakazono ¹, H. Takahashi ¹ (1.Grad. Sch. Bioagric. Sci., Nagoya Univ., 2.Grad. Sch. Engin., Osaka Univ., 3.Inst. Crop Sci., NARO)

P058-B Identification of important traits for waterlogging tolerance in wheat

☆Atsumi, S. ¹, M. Arakawa ², H. Takahashi ¹, M. Nakazono ¹ (1.Grad. Sch. Bioagric. Sci., Nagoya Univ., 2.Aichi Agric. Res. Cent.)

P059-C Analysis of genetic differences in the accumulation of aluminum in tea leaves

☆Fukuda, Y. ¹, H. Yamashita ^{2,3}, A. Ohno ², S. Yonezawa ¹, T. Uchida ¹, H. Katai ⁴, A. Morita ^{1,2}, T. Ikka ^{1,2} (1.Grad. Agr., Shizuoka Univ., 2.Fac. Agr., Shizuoka Univ., 3.Uni. Agr., Gifu Univ., 4.Tea Res. Cent., Shizuoka Pref.)

P060-D Effects of the *PCL1* genes in a winter-type near-isogenic lines of bread wheat cv. "Yumeshiho"

○Fujita, M. ¹, H. Kojima ¹, M. Tougou ¹, C. Otobe ¹, H. Nishida ², K. Kato ² (1.Institute of Crop Science, NARO, 2.Grad. Sch. Environ. Life Sci., Okayama Univ.)

P061-A Phenotyping of soybean root system architecture in Arid Land Research Center

Naruse, T. ¹, B. Khuynh ¹, ○H. Takahashi ¹, K. Hirano ², Y. Toda ³, Y. Omori ³, M. Tsuda ⁴, H. Tsujimoto ⁶, Y. Yamasaki ⁶, Y. Sawada ⁷, M. Hirai ⁷, T. Fujiwara ³, H. Iwata ³, C. Pradal ⁸, M. Matsuoka ², M. Nakazono ¹ (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Biosci. Biotich. Cent., Nagoya Univ., 3.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 4.Grad. Sch. Life&Env. Sci., Univ. Tsukuba, 5.NICS, 6.Arid Land Research Center, Tottori Univ., 7.RIKEN, 8.CIRAD)

P062-B GWAS revealed loci for kernel weight and shape-related traits under heat and combined heat-drought stresses in wheat multiple synthetic derivatives

☆Elhadi, G. ¹, N. Kamal ^{2,3}, Y. Yamasaki ², Y. Gorafi ^{2,3}, K. Takata ⁴, I. Tahir ³, H. Tsujimoto ² (1.United Graduate School of Agricultural Sciences, 2.Arid Land Research Center, Tottori University, 3.Agricultural Research Corporation, Sudan, 4.National Agriculture and Food Research Organization)

P063-C Genetic and physiological analyses of radial oxygen loss barrier formed in lateral roots of *Zea nicaraguensis*

○Nakazono, M. ^{1,3}, Y. Nakayama ¹, H. Yasue ¹, Y. Kurokawa ¹, O. Pedersen ², A. Floytrup ², T. Colmer ³, H. Takahashi ¹, F. Omori ⁴, Y. Mano ⁴ (1.Graduate School of Bioagricultural Sciences, Nagoya University, 2.Department of Biology, University of Copenhagen, 3.Faculty of Science, The University of Western Australia, 4.Forage Crop Research Division, Institute of Livestock and Grassland Science, NARO)

P064-D Genetic diversity in root nodules among soybean cultivars

Tsuchimoto, T. ¹, ○M. Teraishi ¹, T. Yoshikawa ¹, Y. Okumoto ^{1,2} (1.Grad. Sch. Agri., Kyoto Univ., 2.Fac. Agr., Setsunan Univ.)

P065-A Genetic analysis of secondary xylem development between Japanese and Dutch tomatoes

☆Endo, A. ¹, T. Hayashi ¹, A. Oyama ², M. Nakazono ¹, H. Takahashi ¹ (1.Grad. Sch. Bioagr. Sci., Nagoya Univ., 2.NIVFS)

P066-B Responce of potato lines for starch depend on harvesting time

○Kurosaki, H. ¹, S. Aoyama ², M. Oonami ³ (1.Central Agricultural Experiment Station, 2.Donan Agricultural Experiment Station, 3.Tokachi Agricultural Experiment Station)

P067-C Effects of pearling yield on the color of pearled and cooked grains, the percentage of fully pearled-grains, and taste in waxy barley cultivars

○Aoki, E., N. Kohyama, T. Yanagisawa (Inst. Crop Sci., NARO)

P068-D Evaluation of physical properties of asparagus with different diameters by three-pointing test

☆Hikawa-Endo, M. ¹, T. Nakamura ², S. Kozai ², M. Yamaji ², T. Ikeuchi ², R. Yamanaka ¹, H. Kawashima ¹ (1.West. Reg. Agr. Res. Cent., NARO, 2.Kagawa Pref. Agr. Exp. Sta.)

P069-A Phenotypic and genetic analysis of heterosis in sugar beet during early growth

Ohkubo, M. ¹, K. Satoh ¹, R. Iwahori ¹, H. Matsuhira ^{1,2}, T. Kubo ¹, ○K. Kitazaki ¹ (1.Research Faculty of Agriculture, Hokkaido University, 2.Hokkaido Agricultural Research Center, NARO)

P070-B Rice *our1* mutant induces root development through restriction of Auxin signaling

☆Hasegawa, T. ¹, N. Lucob ¹, K. Yasufuku ¹, T. Kojima ¹, S. Nishiuchi ¹, M. Takahashi Nosaka ², M. Inari Ikeda ³, M. Sato ⁴, H. Tsuji ⁴, Y. Inukai ³ (1.Grad. Sch. Bioagri Sci., Univ. Nagoya, 2.National Institute of Genetics, 3.International Center for Research and Education in Agriculture, Univ. Nagoya, 4.KIBR, Univ. Yokohama City)

P071-C Effects of genotypes for photoperiod response, *HvPhyC*, *HvCK2a*, and type of growth habit on barley young spike development

○Seki, M. ¹, E. Aoki ², H. Nishida ³, H. Aoki ¹, M. Nakata ⁴, T. Yanagisawa ², T. Nagamine ¹, K. Kato ³ (1.Central Region Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO, 3.Grad. Sch. Environ. Life Sci., Okayama U., 4.Kyushu Okinawa Agricultural Research Center, NARO)

P072-D Identification of genes induced by a cytokinin-signalling response regulator upon shoot regeneration in rice

Naruse, M., H. Takahashi, ○Y. Ito (Graduate School of Agricultural Science, Tohoku University)

P073-A Analysis of inhibition-mechanisms of seed germination using chromosome substitution lines of wild rice in genetic background of cultivated rice

☆Shimizu-Sato, S. ¹, K. Ta ¹, Y. Yoshida ¹, A. Agata ¹, M. Nosaka-Takahashi ¹, T. Suzuki ¹, Y. Yamagata ², Y. Sato ¹ (1.Natl. Inst. Genet., 2.Fac. Agr., Grad. Sch., Kyushu Univ.)

P074-B Sequence analysis of heading-time related genes of which expression levels are different by *HvCEN* genotype in barley

☆Iwamoto, T., S. Yokota, R. Tanabe, K. Kato, H. Nishida (Grad. Sch. Environ. Life Sci., Okayama U.)

P075-C Identification and characterization of the responsible gene for novel cleistogamous mutant, H193mt, in rice

☆Kuroha, T. ¹, F. Lombardo ¹, S. Ohmori ², T. Akiyama ¹, S. Chechetka ¹, H. Yoshida ¹ (1.Inst. Agrobiological Sci., NARO, 2.Inst. Crop Sci., NARO)

P076-D Analysis of cellular dynamics in the shoot apical meristem of barley under field conditions at the single-cell resolution

☆Arai, S. ¹, S. Kuge ¹, N. Sato ¹, Y. Nomura ¹, M. Sugimura ¹, D. Saisho ², J. Ito ¹, H. Tsuji ¹ (1.KIBR, Yokohama City Univ., 2.IPSR, Okayama U.)

P077-A Single-cell resolution three-dimensional imaging of the shoot apex using *VRN1-GFP* transgenic barley plants

☆Sato, N., J. Ito, S. Kuge, S. Arai, Y. Nomura, H. Tsuji (KIBR, Yokohama City Univ.)

P078-B Differences in growth of wasabi under different hydroponics

☆Mihara, H. ¹, H. Yamashita ^{2,3}, A. Morita ^{1,2}, T. Ikka ^{1,2} (1.Grad. Agr., Shizuoka Univ., 2.Fac. Agr., Shizuoka Univ., 3.Uni. Agr., Gifu Univ.)

P079-C Postharvest properties in ultra-late maturing peaches and their attributions to M locus: novel M haplotypes and re-evaluation of M locus-effect on flesh texture

○Nakano, R. ¹, T. Kawai ², T. Asano ², K. Akita ², S. Watanabe ², D. Takata ³, M. Sato ³, F. Fukuda ², K. Ushijima ² (1.Sch. Agri., Univ. Kyoto, 2.Grad. Sch. Sci., Univ. Okayama, 3.Sch. Agri., Univ. Fukushima)

P080-D Temperature sensitivity and sugar accumulation in hybrid weakness in the cross between *Capsicum annuum* and *C. chinense*

☆Shiragaki, K. ¹, H. Furukawa ^{1,2}, S. Yokoi ^{1,2,3}, T. Tezuka ^{1,2} (1.Grad. Sch. Life Envi. Sci., Osaka Pref. Univ., 2.Educ. Res. Field, Osaka Pref. Univ., 3.Bioecon. Res. Inst., Res. Center 21st Century, Osaka Pref. Univ.)

P081-A Construction of efficient transformation method in tea plants by *in planta* method

☆Lee, S. ¹, M. Kawakami ², K. Teramae ¹, H. Yamasita ^{2,3}, A. Morita ^{1,2}, T. Ikka ^{1,2} (1.Grad. Agr., Shizuoka Univ., 2.Fac. Agr., Shizuoka Univ., 3.Uni. Agr., Gifu Univ.)

P082-B Production of haploid plants via ovary culture combined with ovary stimulation pre-culture using NAA in *Disa* cultivar (*Orchidaceae*)

☆Matsumoto, S. ¹, Y. Kubota ², M. Kameyama ³, A. Nakano ³, J. Kato ⁴ (1.Inst. of Tech. Toyota Col., 2.Fac. Educ., Aichi U. Educ., 3.Grad. Sch. Educ., Aichi U. Educ., 4.Dept. Biol., Aichi U. Educ.)

P083-C Identification of S haplotypes of *Raphanus sativus* by amplicon sequencing

☆Akanuma, T. ¹, M. Yamamoto ¹, A. Shinozawa ², Y. Mitsui ², S. Okamoto ³, H. Kitashiba ¹ (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.Tokyo Univ. of Agri., 3.TAKII SEED)

P084-D Rearrangement of the chromosome region encompassing the S locus region in the somatic mutant of almond

○Ushijima, K. ¹, H. Sassa ² (1.Grad. Sch. Env. Life Sci., Okayama Univ., 2.Grad. Sch. Horticulture, Chiba Univ.)

P085-A Analysis of effects of variants of *AISRK-b* mutant produced by error-prone PCR method on self-incompatibility response

○Yamamoto, M. ¹, S. Ohtake ¹, A. Shinozawa ², Y. Mitsui ², H. Kitashiba ¹ (1.Tohoku University, 2.Tokyo University Of Agriculture)

P086-B Investigation of recognition specificity between similar S haplotypes of *Brassica* and *Raphanus* using transformed *Arabidopsis*

☆Ogura, M., M. Yamamoto, H. Kitashiba (Grad. Sch. Agri. Sci., Tohoku Univ.)

P087-C Mapping of QTL for male sterility of cultivated strawberry

○Wada, T. ¹, T. Sueyoshi ¹, H. Monden ¹, S. Isobe ², K. Shirasawa ², C. Hirata ¹, M. Mori ¹, S. Nagamatsu ¹, Y. Tanaka ¹ (1.Fukuoka Agric. Forest. Res. Cent., 2.Kazusa DNA Res. Inst.)

P088-D Study on the mitochondria from the progeny of a somatic hybrid between *Brassica oleracea* and *Arabidopsis thaliana* having abnormal flower organ

☆Niihara, Y. ¹, M. Tsujimura ³, H. Yamagishi ², T. Terachi ² (1.Grad. Sch. Life Sci., Kyoto Sangyo Univ., 2.Fac. Life Sci., Kyoto Sangyo Univ., 3.Fac. Agr. Dept. Plant Life Sci., Ryukoku Univ.)

P089-A Analysis of the male sterility gene and the epistatic restorer gene derived from an indica rice cultivar Lebed

☆Fujita, Y. ¹, H. Ichida ², T. Kazama ^{1,3}, T. Abe ², K. Toriyama ¹ (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.RIKEN, Nishina Cent., 3.Fac. Agri., Kyushu Univ.)

P090-B Effects of vegetative propagation on growth in perennial rice

☆Nosaka-T, M., Y. Sato (NIG)
