

Title of Papers Presented at the 134th Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 De novo assembly of the indica rice “IR64” genome using Nanopore sequencing and linked-read sequencing

○Tanaka, T. ¹, R. Nishijima ², S. Teramoto ¹, Y. Kitomi ¹, T. Hayashi ¹, Y. Uga ¹, T. Kawakatsu ² (1.NICS, 2.NIAS)

102 Whole Genome Sequencing of Rice Mutants produced by Gamma Ray and Ion Beam Irradiation

☆Li, F. ¹, A. Shimizu ¹, N. Tsutsumi ², H. Kato ³ (1.Rad. Breed. Div., Inst. Crop Sci., NARO, 2.Grad. Sch. Sci., Univ. Tokyo, 3.Genet. Resource Cen., NARO)

103 De novo whole genome assembly in *Chrysanthemum seticuspe*, a model species of Chrysanthemums

Hirakawa, H. ¹, K. Sumitomo ², T. Hisamatsu ², S. Nagano ^{1,6}, K. Shirasawa ¹, Y. Higuchi ³, M. Kusaba ⁴, M. Koshioka ⁵, Y. Nakano ², M. Yagi ², H. Yamaguchi ², K. Taniguchi ⁴, M. Nakano ⁴, ○S. Isobe ¹ (1.Kazusa DNA Res. Inst., 2.IVFS, NARO, 3.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 4.Grad. Sch. Sci., Univ. Hiroshima, 5.Col. Biores. Sci., Nihon Univ., 6.Forest Tree Breed. Cent., FRMO)

104 Genomic structure of chromosomal region for wheat yellow mosaic disease resistance gene, *Ymym*, on chromosome 2D

○Kobayashi, F. ¹, H. Kojima ¹, G. Ishikawa ¹, M. Saito ², T. Takayama ^{1,2}, M. Tougou ¹, C. Otake ¹, H. Matsunaka ³, M. Fujita ¹, T. Nakamura ² (1.NICS, NARO, 2.TARC, NARO, 3.KARC, NARO)

105 Genome-wide SNPs and genetic diversity in Asian radish landraces

Kobayashi, H. ¹, K. Shirasawa ², N. Fukino ³, H. Hirakawa ², ○H. Kitashiba ¹ (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.Kazusa DNA Res. Inst., 3.Inst. Veg. Floric. Sci., NARO)

106 Quantitative methods for cultivar identification in lotus, *Nelumbo nucifera*

○Shirasawa, K. ¹, T. Kuboyama ², M. Horii ³, Y. Higuchi ⁴, S. Isobe ¹ (1.Kazusa DNA Res Inst, 2.Ibaraki U, 3.Ibaraki Plant Biotech Inst, 4.U Tokyo)

107 Selection criteria of SNP loci to maximize robustness of high-resolution melting analysis for plant breeding

Yamagata, Y. ¹, A. Yoshimura ¹, T. Anai ², ○S. Watanabe ² (1.Fac. Agri. Kyushu Univ., 2.Fac. Agri. Saga Univ.)

108 Evaluation of yields and lodging resistances in semi-determinate lines in soybeans

☆Kato, S. ¹, T. Sayama ², F. Taguchi-Shiobara ³, M. Ishimoto ³, E. Cober ⁴ (1.NARO, Tohoku Agricultural Research Center, 2.NARO, Western Region Agricultural Research Center, 3.NARO, Institute of Crop Science, 4.Ottawa Research Development Centre, Agriculture and Agri-Food Canada)

109 Genetic mapping of *Super-open flowering 1* (*sof1*) in barley

☆Hamada, Y. ^{1,2}, N. Anwar ², S. Ning ², P. Mohammad ², H. Nakagawa ², S. Fukuoka ², S. Sakuma ³, A. Nagano ⁴, S. Milner ⁵, M. Mascher ⁵, H. Sassa ¹, T. Koba ¹, T. Komatsuda ^{1,2} (1.Graduate School of Horticulture, Chiba University, 2.Institute of Crop Science, NARO, 3.Faculty of Agriculture, Tottori University, 4.Faculty of Agriculture, Ryukoku University, 5.IPK)

110 Novel QTLs detecting ratios of Bradyrhizobium strains in soybean nodules

○Teraishi, M., C. Ramongolalaina, Y. Okumoto (Grad. Sch. Agri., Kyoto Univ.)

111 Genetic analysis for spike dimorphism in Aegilops section Sitopsis species, wild relatives of wheat

☆Tomita, J. ¹, K. Yamame ¹, A. Ohta ² (1.Fac. Appl. Biol. Sci., Univ. Gifu, 2.Grad. Sch. Agr., Univ. Kyoto)

112 Pyramiding three QTLs of a tetraploid wheat accession TN26 (*Triticum turgidum* L. ssp. *dicoccum*) causes early flowering similar to that by *Ppd-A1a*

☆Nishimura, K., T. Hirao, R. Takisawa, T. Nabeshima, E. Maai, T. Nakazaki (Grad. Sch. Agri., Kyoto Univ.)

113 Identification of the genomic region controlling the character of flowering without vernalization in *Brassica rapa* cv. CHOY SUM EX CHINA 3 by QTL-seq

☆Ito, N. ¹, T. Segawa ¹, H. Kutsuzawa ¹, A. Uemura ², A. Abe ², H. Takagi ¹ (1.Biores. Sci., Ishikawa Pref. Univ., 2.Iwate Biotech. Res. Cent.)

114 Genetic analysis of tuber color in the red turnip *Brassica rapa* cv. Akamaru

☆Segawa, T. ¹, N. Ito ¹, M. Asukai ¹, T. Imamura ², M. Mori ², A. Katayama ^{1,2}, H. Takagi ¹ (1.Ishikawa Prefectural University, 2.Bioresource Engineering Laboratory)

115 Identification of cotyledon or leaf size-related genes in early developmental stages of Chinese cabbage

☆Uezono, K. ¹, D. Shea ², M. Shimizu ³, E. Itabashi ⁴, M. Hasan ¹, K. Okazaki ², T. Yasuda (Takasaki) ¹, R. Fujimoto ¹ (1.Grad. Sch. Agri., Univ. Kobe, 2.Grad. Sch. Sci., Univ. Niigata, 3.Ibrc., 4.naro. affrc)

116 Fine mapping and candidate gene analysis of pre-harvest sprouting resistance gene *Sdr6* on the chromosome 1 in rice

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

117 Pictures are converted into a thousand words ~Picture-based phenotyping of sorghum leaves for multi-trait QTL analysis~

☆Sakamoto, L. ^{1,2}, M. Fujimoto ¹, H. Takanashi ¹, H. Kajiya-Kanegae ¹, K. Noshita ^{3,4}, M. Kobayashi ⁵, K. Yano ⁵, R. Hijiyama ⁶, N. Onishi ⁶, N. Tsutsumi ¹, W. Sakamoto ⁶, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.JSPS Research Fellow, 3.Dep. of Bio., Kyushu Univ., 4.JST, PRESTO, 5.Sch. of Agri., Meiji Univ., 6.Inst. Plant Sci. Res., Okayama Univ.)

118 Classification of environments based on GWAS with epistatic interactions in days to heading of Japanese rice cultivars

☆Yabe, S. ^{1,2}, H. Yoshida ¹, H. Kajiya-Kanegae ³, M. Yamasaki ⁴, H. Iwata ³, K. Ebana ¹, E. Fushimi ¹, R. Kaji ¹, N. Yokogami ¹, H. Maeda ¹, K. Murata ⁵, O. Ideta ¹, T. Kataoka ¹, T. Hayashi ¹, H. Nakagawa ¹ (1.NARO, 2.PRESTO, JST, 3.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 4.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe Univ., 5.Toyama Pref. Agricultural, Forestry and Fisheries Research Ctr.)

119 QTL-seq analysis for the chlorophyll content of rice seedlings under low temperature conditions

○Fukuda, A. ¹, H. Yamakawa ² (1.Central Region Agricultural Research Center, NARO, 2.Agriculture, Forestry and Fisheries Research Council)

120 Regional differentiation of gene variants associated with starch synthesis among brewing-rice varieties

○Yoshida, S. ^{1,2}, K. Hirano ³, K. Yano ⁴, M. Matsuoka ³ (1.Res. Inst. for food & Agr., Ryukoku Univ., 2.Hyogo Pref. Tech. Ctr. for Agr., Forest. and Fish., 3.Bioscience and Biotechnology Ctr. Nagoya U., 4.RIKEN Ctr. for Advanced Intelligence Project)

121 Comparing DNA extraction methods used in marker-assisted selection of soybean

○Taguchi-Shiobara, F. (Institute of Crop Science, NARO)

201 Expression analysis of abscission-related genes during ovary abscission observed in tobacco interspecific-interploidy crosses

☆He, H., S. Yokoi, T. Tezuka (Grad. Sch. Life Envi. Sci., Osaka Pref. U.)

202 Induction of male sterility by cytoplasm of Black radishes

○Yamagishi, H. ¹, Y. Tanaka ², S. Shiiba ¹, A. Hashimoto ³, A. Fukunaga ¹, T. Terachi ¹ (1.Fac. Life Sci., Univ. Kyoto Sangyo, 2.Grad. Sch. Env. & Life Sci., Univ. Okayama, 3.Univ. Kyoto Sangyo Plant Organelle Genomics R. C.)

203 Detection of a novel locus involved in non-shattering behaviour of a Japonica rice cultivar, 'Nipponbare'

☆Sugiyama, S., Y. Tsujimura, K. Otsuka, T. Htun, T. Ishii, R. Ishikawa (Grad. Sch. Agr. Sci., Kobe Univ.)

204 Meiotic abnormality estimated from anther culture callus derived from interspecific hybrid between *Oryza sativa* and *O. glaberrima*

☆Kuniyoshi, D. ¹, I. Masuda ¹, Y. Shimazaki ¹, Y. Kanaoka ¹, Y. Hoshino ², Y. Koide ¹, Y. Kishima ¹ (1.Graduate School of Agriculture, Hokkaido University, 2.Field Science Center for Northern Biosphere, Hokkaido University)

205 Creation and identification of a neutral allele of the hybrid sterility locus *S1* in rice

☆Koide, Y. ¹, A. Ogino ¹, T. Yoshikawa ^{2,3}, Y. Kitashima ¹, N. Saito ¹, Y. Kanaoka ¹, K. Onishi ⁴, Y. Yoshitake ², T. Tsukiyama ², H. Saito ^{2,5}, M. Teraishi ², Y. Yamagata ⁶, A. Uemura ⁷, H. Takagi ⁷, Y. Hayashi ⁸, T. Abe ⁸, Y. Fukuta ⁵, Y. Okumoto ², A. Kanazawa ¹ (1.Hokkaido U., 2.Kyoto U., 3.Kibi Int. U., 4.Obihiro U. Agr. Vet. Med., 5.JIRCAS, 6.Kyushu U., 7.Iwate Agric. Res. Ctr., 8.RIKEN)

206 Genetic analysis of segregation distortion observed in the progeny derived from rice crosses between Taichung 65 and aus varieties

☆Kunieda, M. ¹, H. Sunohara ¹, M. Tasaki ¹, S. Nishiuchi ^{1,2}, K. Doi ¹ (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.JST PRESTO)

207 Isolation and characterization of a pollen S candidate gene in *Hordeum bulbosum*

○Kakeda, K. ¹, D. Hasegawa ¹, R. Sakakibara ¹, A. Inoue ¹, K. Mishina ², T. Komatsuda ² (1.Fac. Bioresour., Mie Univ., 2.Inst. Crop Sci., NARO)

208 Expression of PPR protein genes in eggplants having a fertility restorer gene

☆Kodama, K. ¹, M. Tsujimura ², A. Hashimoto ², R. Takahashi ², T. Saito ³, H. Yamagishi ⁴ (1.Grad. Sch. Life Sci., Kyoto Sangyo U., 2.Kyoto Sangyo U., Plant Organelle Genomics R. C., 3.NIVFS, 4.Fac. Life Sci., Kyoto Sangyo U.)

209 Study of high-temperature effect on *Brassica* self incompatibility by using self-incompatible *A. thaliana*

☆Yamamoto, M. ¹, K. Nishimura ², H. Kitashiba ¹, W. Sakamoto ², T. Nishio ¹ (1.Plant Breeding and Genetics, Tohoku University, 2.Plant Light Acclimation Research Group, Okayama University)

210 Stigmatic Privacy 1 actively rejects pollen grains from other species

○Fujii, S. ^{1,2}, T. Tsuchimatsu ³, H. Shimosato-Asano ⁴, M. Iwano ⁴, S. Ishida ¹, S. Furukawa ⁴, W. Itoyama ⁴, Y. Wada ⁴, K. Shimizu ⁵, S. Takayama ¹ (1.U Tokyo, Grad Sch Agric Life Sci, 2.JST PRESTO, 3.Chiba U, Dep Biol, 4.Nara Inst Sci Tech, 5.U Zurich, Dep Evol Biol)

211 *LUX/PCL1* confer extra-early flowering in wheat

☆Sato, H. ¹, G. Haque ¹, H. Nishida ¹, N. Mizuno ², M. Fujita ³, S. Nasuda ², K. Kato ¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.Grad. Sch. Agr., Kyoto U., 3.NICS)

212 Expression analyses of flowering-time genes in *lh1*, a late-heading revertant which suppresses the early-flowering phenotype due to a clock gene deletion

☆Ueda, J. ¹, Y. Kazama ², T. Abe ², K. Murai ¹ (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.RIKEN, Nishina Cent.)

213 Extreme suppression of lateral floret in barley contributes to enlarged grain

☆Sakuma, S. ¹, T. Komatsuda ² (1.Faculty of Agriculture, Tottori University, 2.NARO)

214 Detection of quantitative trait loci controlling grain zinc concentration using Australian wild rice *Oryza meridionalis*

☆Miyazaki, N. ¹, K. Taniko ¹, M. Iwata ¹, G. Monden ¹, C. Orn ¹, S. Yoshida ¹, T. Isii ¹, J. Ma ², R. Ishikawa ¹ (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.IPSR, Okayama Univ.)

215 Analysis of the *abnormal aleurone layer 2* generating ectopic aleurone-like cell in rice developing endosperm

☆Katoh, H. ¹, Y. Kobayashi ², I. Kobayasi ², H. Kitano ¹, S. Takeda ¹, T. Hattori ¹ (1.Nagoya Univ. Biosci. Biotech. C., 2.Mie Univ. Ad. Sci. Res. Prom. C.)

216 Analysis of meristem maintenance regulation via the FON2 signaling pathway in rice

☆Suzuki, C., W. Tanaka, H. Hirano (Sch. Sci., Univ. Tokyo)

217 Genetic analysis on a rice mutant defective in tiller formation

☆Namiki, M., W. Tanaka, H. Hirano (Grad. Sch. Sci., Univ. Tokyo)

218 RNA-Seq analysis of gene expression for grain dormancy in *Tamyb10* introduced wheat

☆Himi, E. ¹, S. Kurihara ², F. Abe ³, K. Tanaka ⁴, T. Matsuura ¹, M. Maekawa ¹ (1.Institute of Plant Science and Resources, Okayama Univ., 2.Hokkaido Agricultural Research Center, NARO, 3.Institute of Crop Science, NARO, 4.NODAI Genome Research Center)

219 Increasing of aliphatic glucosinolate content by polyploid breeding of Brassicaceae

○Yamaguchi, M. ¹, S. Sonoda ¹, T. Suzuki ², T. Ohnishi ^{1,3}, S. Bang ¹ (1.Sch. Agric., Utsunomiya Univ, 2.Center for Bioscience Research and Education, Utsunomiya University, 3.PREST, JUST)

220 Genomic regions affecting bolting tolerance of biennial sugar beet as assessed by using an F2 population

○Kuroda, Y., H. Matsuhira, K. Okazaki, S. Ueda, K. Taguchi (NARO HARC)

301 Explore for locus related to clubroot resistance in a radish cultivar 'Shogoin'

☆Akaishi, K. ¹, T. Yoshida ², O. Kawaide ², T. Takayama ¹, L. Kawaguchi ³, A. Nagano ³, T. Suzuki ⁴, F. Azuhata ², S. Niikura ², S. Bang ¹, T. Ohnishi ^{1,5} (1.Sch. Agric., Utsunomiya Univ., 2.TOHOKU SEED CO., LTD., 3.Sch. Agric., Ryukoku University, 4.Center for Bioscience Research and Education, Utsunomiya University, 5.PREST, JST)

302 An NB-LRR gene, *TYNBS1*, is responsible for resistance mediated by the *Ty-2* *Begomovirus* resistance locus of tomato

○Yamaguchi, H. ¹, J. Ohnishi ², A. Saito ¹, A. Ohyama ¹, T. Nunome ¹, K. Miyatake ¹, H. Fukuoka ¹ (1.NIVFS., NARO, 2.CALC., NARO)

303 QTL analysis of field resistance to leaf blast in rice variety 'Ta Hung Ku'

☆Tsuda, N. ¹, S. Fukuoka ², H. Ohta ¹ (1.Tohoku Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO)

304 Resistance to bacterial blight in rice cultivar Asominori. V. QTL analysis of F₂ populations from the cross of Asominori IAS (CSSLs)/IR24

○Taura, S. ¹, T. Tanaka ², Y. Kawaguchi ², K. Ichitani ² (1.Div. Gene Res., Kagoshima U., 2.Fac. Agri., Kagoshima U.)

305 QTL analysis for resistance to pecky rice bugs in rice variety "Davao1"

☆Ozaki, H. ¹, Y. Aoki ¹, H. Nishijima ², T. Yamaguchi ¹, K. Murata ¹, Y. Kojima ¹ (1.Toyama Pref. Agr. Forest. fishi. Res. Cent, 2.Toyama Pref. Agr. Tech. Div)

306 Proteomic analysis of protein aggregates accumulated in rice embryo during high-temperature imbibition

☆Ueno, N., T. Yamada (United Grad. Sch. Agr., Tokyo U. Agr. Tec.)

307 Origin and cultivation of deepwater rice adapted to periodic flooding

☆Kuroha, T. ¹, D. Wang ², S. McCouch ², R. Yokoyama ¹, K. Nishitani ¹, M. Ashikari ³
(1.Grad. Sch. Life Sci., Tohoku Univ., 2.Cornell Univ., 3.Biosci. and Biotech. Center,
Nagoya Univ.)

308 SCN race5 resistance originated in PI90763 and Peking

○Suzuki, C. ¹, H. Shinada ², Y. Yamashita ³, T. Toudai ¹, A. Kushida ⁴ (1.Tokachi Agri.
Exp. Stn., HRO., 2.Kitami Agri. Exp. Stn., HRO., 3.Chuo Agri. Exp. Stn., HRO., 4.NARO
Hokkaido Agric. Res. Cent.)

309 Submergence tolerance of bread wheat: effects of cytoplasm substitution and seed aging

☆Takenaka, S., R. Yamamoto, C. Nakamura (Fac. Agric., Ryukoku Univ.)

310 Effects of a photoperiod-response gene Ppd-D1 on agronomic traits in spring wheat

☆Ashikaga, N. ¹, Y. Yamashita ², S. Ohnishi ¹, H. Jinno ¹ (1.Kitami Agri. Exp. Stn., HRO.,
2.Central Agri. Exp. Stn., HRO.)

311 Microstructural analysis of waxy barley and identification of waxy genotypes

○Ikeda, T. ¹, T. Yanagisawa ², T. Tonooka ³, H. Maejima ⁴ (1.NARO, Western Agricultural
Research Center, 2.NARO, Institute of Crop Science, 3.NARO, Headquarters, 4.Nagano
Pref. Agric. Exp. Stn.)

312 Establish of analysis method for glucosinolates of cruciferous vegetables. Simple and quick quantitative method

○Serizawa, H. (Nagano Vegetable and Ornamental Crops Experiment Station)

313 Analysis of triterpenoids in soybean secondary aerenchyma

☆Gorai, T. ¹, S. Hiraga ², A. Kaga ², M. Nakazono ¹, H. Takahashi ¹ (1.Grad. Sch. Bioagr.
Sci., Nagoya Univ., 2.NICS)

314 Elucidation of periodic Na exclusion in *Vigna. marina* using radio-sodium real-time imaging system

☆Noda, Y. ^{1,2}, J. Furukawa ², N. Suzui ³, Y. Yin ³, S. Ishii ³, K. Kurita ³, N. Kawachi ³, K. Naito ¹, N. Tomooka ¹ (1.Genetic Resources Center, NARO., 2.CRIED., Univ. Tsukuba., 3.TARRI, QST.)

315 Analysis of growth and physiological characteristics in Cngc2-deficient mutants in reproductive stage under heat stress condition

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

316 Relationship between the secondary xylem development and the yield of tomato

☆Hayashi, T. ¹, Y. Iwata ¹, A. Oyama ², M. Tanigawa ², M. Okumura ², Y. Kakei ², S. Imanishi ², H. Takahashi ¹, M. Nakazono ¹ (1.Grad. Sch. Bioagric. Sci., Nagoya U., 2.NARO Institute of Vegetable and Floriculture Science)

317 Canceled

318 Genetic analyses of novel sweet pepper variety caused by pAMT mutation that is first found in paprika cultivars

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

319 Diversity of Sri Lankan rice in response to plant growth promoting bacteria for days to flowering

○Geekiyanaige, S. ¹, D. Padukkage ², K. HWKSL ², P. Wickramatathna ¹, P. Greenberg ³ (1.Faculty of Agriculture, University of Ruhuna, Sri Lanka, 2.Faculty of Graduate Studies, University of Ruhuna, Sri Lanka, 3.Department of Microbiology, School of Medicine, University of Washington, USA)

320 Introgression of the high level of late blight resistance from a Mexican wild diploid species *Solanum pinnatisectum* to potato varieties

☆Sanetomo, R. ¹, K. Hosaka ¹, I. Habe ² (1.Obihiro University of Agriculture and Veterinary Medicine, 2.Nagasaki Agricultural and Forestry Technical Development Center)

321 Production of *Diplotaxis tenuifolia*-*Brassica oleracea* disomic addition lines and analysis of photosynthetic characteristics

☆Nagashima, Y. ¹, Y. Wada ¹, T. Ohnishi ^{1,2}, S. Bang ¹ (1.Sch. Agric., Utsunomiya Univ., 2.PREST, JST)

401 Analysis of ultra-fast thermomemory of plant

☆Ohyoshi, K. (Sophia University)

402 Quantitative association of accumulation of preSATP6 protein complex with pollen fertility in cytoplasmic male sterility in sugar beet

☆Arakawa, T., S. Ue, C. Sano, H. Kagami, Y. Yoshida, K. Kitazaki, T. Kubo (Grad. Sch. Agr., Univ. Hokkaido)

403 B subunits of protein phosphatase 2A are essential for not female gametes but male gametes in *Arabidopsis*

☆Tsugama, D. ¹, K. Fujino ¹, T. Takano ² (1.Res. Fac. Agr., Hokkaido Univ., 2.ANESC., U. Tokyo)

404 Effects of tissue-specific expression of SvHKT2s on salt tolerance in transgenic *Arabidopsis*

○Tada, Y., T. Kugimiya (School of Bioscience and Biotechnology)

405 Genomic analysis of OsHDA705 that is involved in salt sensitivity of rice

Numa, H. ¹, Y. Yoshida ², ○Y. Habu ² (1.NARO NAAC, 2.NARO NIAS)

406 Screening of chloroplast DNA fragments that confer autonomous replication ability on a chloroplast transformation vector

☆Kojima, K. ¹, K. Uemura ², K. Nakamoto ², T. Terachi ² (1.Grad. Sch. Life Sci., Kyoto Sangyou U., 2.Fac. Life Sci., Kyoto Sangyou U.)

407 Phytochrome signaling induces genome-wide changes in alternative promoter selection

☆Ushijima, T. ¹, K. Hanada ², T. Matsushita ¹ (1.Kyushu University, 2.Kyushu Institute of Technology)

408 Genome editing by engineered SpCas9 with NGN-PAM in plants

☆Mikami, M. ^{1,2}, M. Endo ², A. Endo ², H. Kaya ², T. Itoh ³, H. Nishimasu ⁴, O. Nureki ⁴, S. Toki ^{1,2,5} (1.Gra. Sch. Nanobiol., Yokohama City Univ., 2.NIAS, NARO, 3.NAAC, NARO, 4.Gra. Sch. Sci., Univ. Tokyo, 5.Kihara Inst. Biol. Res., Yokohama City Univ.)

409 Adenine base editing using an engineered SpCas9 which can recognize NG as PAM

☆Negishi, K. ¹, H. Kaya ^{1,2}, K. Abe ¹, N. Hara ¹, H. Saika ¹, H. Nishimasu ³, O. Nureki ³, S. Toki ^{1,4} (1.NARO, Inst. of Agro. Sci., 2.Grad. Sch. Agric., Ehime Univ., 3.Grad. Sch. Sci., Univ. Tokyo, 4.Kihara Inst. for Bio. Res., Yokohama City Univ.)

410 Non-canonical biallelic Gene Targeting (GT) in rice

☆Ohtsuki, N. ¹, K. Kizawa ², S. Toki ^{1,3} (1.National Agriculture and Food Research Organization (NARO), 2.Nisshin Flour Milling Inc., 3.Kihara Institute for Biological Research, Yokohama City University)

411 Genome editing of all *TaQsd1* homoeologous genes using CRISPR/Cas9 in bread wheat: 1. Efficient isolation of homozygous edited lines

○Abe, F. ¹, H. Hisano ², M. Mikami ^{3,4}, Y. Kamiya ⁵, K. Onishi ⁶, E. Haque ¹, T. Tanaka ¹, M. Endo ⁴, K. Kawaura ⁵, K. Sato ² (1.Inst. Crop Sci., NARO, 2.ISPR, Okayama Univ., 3.Grad. Sch. Nanobiol., Yokohama City Univ., 4.Inst. Agrobio. Sci., NARO, 5.KIBR, Yokohama City Univ., 6.Obihiro Univ. Agric. Vet. Med.)

412 Genome editing of all *TaQsd1* homoeologous genes using CRISPR/Cas9 in bread wheat: 2. Transgenes were completely removed by genetic segregation

Kamiya, Y. ¹, ○K. Kawaura ¹, F. Abe ², T. Tanaka ², E. Haque ², M. Mikami ^{3,4}, M. Endo ⁴, H. Hisano ⁵, K. Sato ⁵ (1.KIBR, Yokohama City Univ., 2.Inst. Crop Sci., NARO, 3.Grad. Sch. Nanobiol., Yokohama City Univ., 4.Inst. Agrobio. Sci., NARO, 5.IPSR, Okayama Univ.)

413 Site-directed mutagenesis of allergenic genes by genome editing in soybean

☆Sugano, S. ¹, K. Adachi ¹, A. Hirose ¹, Y. Kanazashi ¹, N. Maruyama ², J. Muraoka ³, H. Nakayama ³, J. Abe ¹, T. Yamada ¹ (1.Grad. Sch. Agric., Hokkaido Univ., 2.Grad. Sch. Agric., Kyoto Univ., 3.Panasonic Co.)

414 Forward-genetic screening of genes controlling plant architecture using high density mutations and bulked segregant analysis in soybean

○Hiraga, S. ¹, H. Yamakawa ^{2,5}, T. Yamada ¹, K. Hirata ³, S. Shimamura ³, A. Kikuchi ³, T. Anai ⁴, A. Kaga ¹, M. Ishimoto ¹ (1.Inst. Crop Sci., NARO, 2.Cent. Reg. Agric. Res. Centr., NARO, 3.Tohoku Agric. Res. Centr., NARO, 4.Fac. Agric., Saga Univ., 5.Curr. Agric. Forest. Fish. Res. Counc., MAFF)

415 Forward genetic screening for triterpenoid biosynthesis in a high-density soybean mutant library and assessments of the resultant mutants

Krishnamurthy, P. ¹, Y. Fujisawa ¹, K. Mukaiyama ², Y. Takahashi ², H. Abe ², K. Yamane ², A. Ito ², S. Hiraga ¹, A. Kaga ¹, T. Anai ³, C. Tsukamoto ², ○M. Ishimoto ¹ (1.Institute of Crop Science, NARO, 2.Faculty of Agriculture, Iwate University, 3.Faculty of Agriculture, Saga University)

416 Rice OsTTA regulates the transport of metals

☆Tanaka, N. ^{1,5}, S. Uruguchi ^{2,5}, M. Kajikawa ^{3,5}, A. Saito ^{4,5}, Y. Ohmori ⁵, T. Fujiwara ⁵ (1.Institute of Crop Science, National Agriculture and Food Research Organization, 2.Department of Public Health, School of Pharmacy, Kitasato University, 3.Graduate School of Biostudies, Kyoto University, 4.Department of Applied Biological Chemistry, Tokyo University of Agriculture, 5.Graduate School of Agricultural and Life Sciences, The University of Tokyo)

417 Characterization of the two CENH3 variants of cowpea (*Vigna unguiculata*) - a prerequisite to generate a haploid inducer

○Ishii, T. ^{1,2}, M. Juranic ², T. How ², A. Koltunow ², A. Houben ³ (1.Arid Land Research Center (ALRC), Tottori University, 2.Commonwealth Scientific and Industrial Research Organization (CSIRO), Agriculture and Food, 3.Leibniz Institute of Plant Genetics and Crop Plant Research (IPK))

418 Canceled

419 Development of the plant genome portal site, PlantGARDEN and Current status of de novo plant genome sequencing

☆Harada, D. ¹, H. Ichihara ², A. Nakaya ², A. Ghelfi ¹, K. Fujishiro ¹, M. Kohara ¹, H. Hirakawa ¹, S. Tabata ¹, S. Isobe ¹ (1.Kazusa DNA Res. Inst., 2.Grad. Sch. Medi., Univ. Osaka)

501 Development of a new rice cultivar “FUFUFU”

☆Kojima, Y. ¹, Y. Iyama ², T. Yamaguchi ¹, K. Murata ¹, Y. Kidani ³, Y. Muraoka ¹, H. Maeda ⁴, K. Fujita ⁵, H. Ozaki ¹, S. Ikegawa ¹, H. Ikeda ³, S. Fukuoka ⁶, T. Ebitani ¹ (1.Toyama Pref. Agr. Fores. Fish. Res. Cent., 2.Toyama Agr. Fores. Prom. Cent., Takaoka, 3.Toyama Agr. Fores. Prom. Cent., Tonami, 4.MAFF, 5.Toyama Agr. Fores. Prom. Cent., Niikawa, 6.Inst. Crop Sci., NARO)

502 Exploration of Cucurbitaceae crops in Southern Cambodia

○Tanaka, K. ¹, G. Shigita ², Y. Sophea ³, S. Sophany ³, N. Tomooka ⁴, K. Kato ² (1.Fac. Agric. Life Sci., Hirosaki U., 2.Grad. Sch. Environ. Life Sci., 3.CARDI, 4.NARO/ Genet. Resour. Cent.)

503 Agronomic characters of hybrid wheat lines generated by open pollination using photoperiod-sensitive cytoplasmic male sterility (PCMS)

○Murai, K. ¹, Y. Takenouchi ², N. Ishikawa ³ (1.Fac. Biosci. Biotech., Fukui Pref. U., 2.HOKUREN, Agr. Res. Inst., 3.WARC/NARO)

504 Agricultural traits of early-heading “Kitanokaori” produced by the recurrent backcrossing with early-type synthetic bread wheat as a non-recurrent parent

☆Mitta, S. ¹, S. Takumi ², K. Murai ¹ (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.Grad. Sch. Agr. Sci., Kobe Univ.)

505 Genetic diversity in Japanese apricot based on exome sequencing

☆Numaguchi, K. ^{1,2}, T. Akagi ^{3,4}, Y. Kitamura ¹, T. Oe ¹, R. Ishikawa ², T. Ishii ² (1.Japanese apricot Lab., Wakayama Fruit Exp. Sta., 2.Grad. Sch. Agr. Sci., Kobe Univ., 3.Grad. Sch. Agr., Kyoto Univ., 4.JST, PRESTO)

506 Molecular characterization of several sea buckthorn (*Hippophae rhamnoides* L.) cultivars bred in Russia, Germany and Finland

Ueno, S. ¹, Y. Kawai ², S. Hasegawa ¹, R. Kikuchi ¹, K. Kondo ³, ○N. Asakura ¹ (1.Fac. Engin., Kanagawa Univ., 2.Fac. Agr., Tokyo Univ. of Agriculture, 3.The Research Institute of Evolutionary Biology)

507 Basic study on genetic polymorphism for selection of building greening suitable lines in *Racomitrium japonicum*

☆Hara, A., Y. Takahara (Bioeng. Nagaoka Univ. Tech)

508 Phylogenetic analysis of five domesticated *Capsicum* species using morphological characteristics and ITS region of nuclear rDNA

☆Shiragaki, K., S. Yokoi, T. Tezuka (Grad. Sch. Life Envi. Sci., Osaka Pref. Univ.)

509 Collaborative phenotyping for the integrative modeling of drought tolerance in soybean

○Iwata, H. ¹, Y. Toda ¹, G. Sasaki ¹, T. Naruse ², Y. Yamasaki ³, H. Takahashi ², H. Takanashi ¹, H. Kajiya-Kanegae ¹, M. Tsuda ⁴, Y. Sawada ⁵, H. Tsujimoto ³, A. Kaga ⁶, M. Nakazono ², T. Fujiwara ¹ (1.Grad. Sch. Agr. Life Sci., Univ. of Tokyo, 2.Grad. Sch. Bioagricultural Sci., Nagoya University, 3.Arid Land Res. Ctr., Tottori University, 4.Fac. Life Env. Sci., Univ. of Tsukuba, 5.RIKEN Center for Sustainable Resource Science, 6.NARO Institute of Crop Science)

510 Predictability of Hybrid Performance via Combining Ability Models in Interaction with Environmental Data

☆Jarquin, D. (Agronomy and Horticulture, University of Nebraska-Lincoln)

511 Genome-enabled prediction and genome-wide association analysis for longitudinal image-based data in rice

○Morota, G. (Virginia Polytechnic Institute and State University)

512 Canceled

513 Development of genome constellated lines (GCLs) introducing 'Takanari' genome fragments on the 'Koshihikari' background

○Tanaka, J. ¹, T. Kataoka ², A. Miyao ¹, H. Ishikawa ³, K. Hori ¹ (1.NICS/NARO, 2.KARC/NARO, 3.Ibaraki Univ.)

514 Simultaneous estimation of crop growth model parameters for multiple genotypes with approximate Bayesian computation (ABC)

☆Toda, Y. ¹, H. Wakatsuki ², H. Kajiya-Kanegae ¹, M. Yamasaki ³, K. Ebana ⁴, T. Hayashi ⁵, H. Nakagawa ², T. Hasegawa ⁶, H. Iwata ¹ (1.Grad. Sch. Agr. & Life Sci., U. Tokyo,

2.NIAES, 3.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe U.,
4.NGRC, 5.NICS, 6.TARC/NARO)

515 GenomeBasedModel: An R package for estimating parameters of biological statistical models and effects of genome-wide SNPs on the parameters simultaneously

○Onogi, A. ^{1,2} (1.NICS, NARO, 2.JST PRESTO)

516 Development of a computer vision technology for rice appearance quality evaluation

☆Shiokawa, K. ¹, T. Kondo ¹, K. Doi ¹, S. Nishiuchi ^{1,2} (1.Nagoya University, Graduate School of Bioagricultural Sciences, 2.JST Presto)

517 Development of rice heading identification technology using UAV

☆Kondo, T. ¹, K. Shiokawa ¹, K. Doi ¹, S. Nishiuchi ^{1,2} (1.Nagoya University, Graduate School of Bioagricultural Sciences, 2.JST Presto)

518 A breeder-friendly drone-based field phenotyping pipeline for sugar beet breeding research

☆Guo, W. ¹, A. Itoh ², M. Hirafuji ¹, S. Ninomiya ¹, K. Taguchi ² (1.Grad. Sch. Agri. Sci., Univ. Tokyo, 2.NARO-HARC)

519 Development of image analysis for measuring comprehensive phenotype of soybean growth

○Tanabata, T. ¹, S. Isobe ¹, A. Hayashi ¹, H. Tanaka ², M. Hashiguchi ², T. Hashiguchi ², R. Akashi ², M. Hasegawa ³, M. Kikuchi ³, A. Nakaya ³, S. Sato ⁴, S. Tanabata ⁵
(1.Kazusa DNA Research Institute, 2.University of Miyazaki, 3.Osaka University, 4.Tohoku University, 5.Ibaraki University)

520 Phenotypic variation for quantitative traits in soybean mutants obtained via ion-beam irradiation

☆Natasia, . ¹, K. Nakashima ¹, Y. Hase ², T. Yamada ¹, J. Abe ¹, A. Kanazawa ¹ (1.Res. Fac. Agr., Hokkaido Univ., 2.Takasaki Adv. Radiat. Res. Inst., QuBS, QST)

Poster presentations

P001 A trial to improve rice quality by using an original genome editing vector and a versatile method for high-density crop hydroponics

○Kuroda, M. (NARO Central Region Agric. Res. Cent.)

P002 The development of a method for assessing green stem disorder insensitivity of soybean by pod removal at ripening stage

○Ogata, D., R. Okuno, O. Uchikawa (Fukuoka Agric. Forest. Res. Cent.)

P003 Evaluation method for waterlogging tolerance in barley by hydroponics

○Todoroki, T. ¹, Y. Haraguchi ¹, H. Pham Thi Thanh ², T. Abiko ², H. Kai ¹ (1.Fukuoka Agric. Forest. Res. Cent., 2.Faculty of Agriculture, Kyushu University)

P004 A cost-effective combined marker-assisted selection for introgression of stay-green QTL in sorghum

Kamal, N. ^{1,2}, Y. Gorafi ^{1,2}, ○H. Tsujimoto ¹, A. Ghanim ^{2,3} (1.Arid Land Research Center, Tottori University, 2.Agricultural Research Corporation, Sudan, 3.International Atomic Energy Agency (IAEA), Seibersdorf, Austria)

P005 Evaluation of soybean breeding line at field using deep learning method

○Yamada, T. ¹, J. Yonemaru ¹, Y. Nanjo ¹, K. Takahashi ¹, A. Hishinuma ², A. Kikuchi ² (1.Inst. Crop Sci., NARO, 2.Tohoku Agric. Res. Cent., NARO)

P006 Non-destructive 3D imaging of rice root system on X-ray CT inspection

☆Nishijima, R. ¹, N. Suzui ², Y. Yin ², Y. Miyoshi ², K. Kurita ², M. Yamaguchi ², S. Teramoto ³, Y. Kitomi ³, T. Tanabata ⁴, Y. Uga ³, N. Kawachi ², T. Kawakatsu ¹ (1.NIAS, 2.TARRI, QST, 3.NICS, 4.Kazusa DNA Res. Inst.)

P007 Factors on the transformation efficiency of tea plants mediated by *Rhizobium rhizogenes*

☆Teramae, K. ¹, A. Nakamura ², H. Yamashita ^{1,3}, K. Yamaki ⁴, K. Furukawa ^{4,5}, H. Koyama ³, T. Ikka ², A. Morita ² (1.Grad. Sch. Agr., Univ. Shizuoka, 2.Fac. Agi., Univ. Shizuoka, 3.Uni. Grad. Sch. Agr. Sci., Univ. Gifu, 4.Advanced course, Nat. Inst. Tec., Numazu Col., 5.Dep. Chem. Chem. Bio., Nat. Inst. Tec., Numazu Col.)

P008 Variation in isoflavone content in mutant soybean lines with an altered chlorophyll content induced by ion-beam irradiation

☆Shiroshita, Y. ¹, Y. Hase ², T. Yamada ¹, J. Abe ¹, A. Kanazawa ¹ (1.Res. Fac. Agr., Hokkaido Univ., 2.Takasaki Adv. Radiat. Res. Inst., QuBS, QST)

P009 Optimization particle bombardment parameters and culture process of somatic embryos after transformation by particle gun in tea plant (*Camellia sinensis*)

☆Yamaki, K. ¹, M. Koizumi ¹, T. Ikka ², A. Morita ², K. Furukawa ³ (1.National Institute of Technology, Numazu College, Advanced course, 2.Faculty of Agriculture, Shizuoka University, 3.National Institute of Technology, Numazu College, Department of chemistry and biochemistry)

P010 Low amylose sweetpotato lines developed by inbreeding and γ -ray irradiation

○Katayama, K. ¹, M. Nishinaka ¹, T. Kuranouchi ¹, A. Ohara-Takada ² (1.Institute of Crop Science, NARO, 2.NARO)

P011 Development of cytoplasmic male sterile lines and restorer lines of seven elite Indica Group rice cultivars using CW-CMS/ *Rf17* system

○Toriyama, K. ¹, T. Kazama ¹, Y. Fukuta ², M. Oka ³ (1.Grad. Sch. Agri. Sci, Tohoku Univ., 2.TARF, JIRRCAS, 3.Miyagi Univ. of Education)

P012 Rice breeding for phytoremediation of Cd polluted paddy field. 3. Breeding of a practical high-Cd line 'TJTT8' with non-shattering and lodging resistance

○Abe, T. ¹, M. Ito ², R. Takahashi ², T. Honma ³, N. Sekiya ^{4,5}, K. Shirao ⁶, M. Kuramata ¹, M. Murakami ¹, S. Ishikawa ¹ (1.NIAES, NARO, 2.Akita Pref. Agri. Exp. Stn., 3.Niigata Agri. Res. Inst., 4.Nagano Agri. Exp. Stn., 5.Nagano Animal Ind. Exp. Stn., 6.Kumamoto pref. Agri. Res. Ctr.)

P013 A new soybean cultivar 'Toiku258' with processing suitability for tofu

○Kobayashi, S. ¹, F. Kousaka ¹, C. Suzuki ¹, N. Yamaguchi ¹, S. Fujita ², H. Shinada ³, T. Miyoshi ¹, S. Hagihara ³, H. Kurosaki ⁴, S. Aoyama ³, M. Okuyama ¹, Y. Yamashita ⁴, K. Nakamichi ⁴, K. Takeuchi ⁴, M. Kawahara ⁵ (1.Tokachi Agricultural Experiment Station, 2.Kamikawa Agr. Exp. Stn., 3.Kitami Agr. Exp. Stn., 4.Central Agr. Exp. Stn., 5.Tokachi Foundation)

P014 The role of the Protein Disulfide Isomerase Like (PDIL) 2-3 in the accumulation of the storage proteins in rice endosperm

☆Saw Myat Nwe, ., M. Fukuda, T. Kumamaru (Institute of Genetics Resources, Faculty of Agriculture, Kyushu University)

P015 Gene flow from cultivated rice to wild rice in tropical Asian countries

☆Tanio, Y. ¹, C. Orn ², M. Akimoto ³, R. Shishido ⁴, T. Htun ⁵, P. Phan ⁶, K. Nonomura ⁷, Y. Koide ⁸, R. Ishikawa ¹, T. Ishii ¹ (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.Cambodian Agr. Res. Dev. Inst., 3.Obihiro Univ., 4.Coll. Biores. Sci., Nihon Univ., 5.Yezin Agr. Univ., Myanmar, 6.Nong Lam Univ., Vietnam, 7.Nat. Inst. Genet., 8.Grad. Sch. Agr. Sci., Hokkaido Univ.)

P016 Genetic diversity analysis of Indonesian aromatic rice (*Oryza sativa* L.) using RAPD markers

○Zakiyah, N. ^{1,2}, T. Handoyo ² (1.Faculty of Life and Environmental Sciences, Prefectural University of Hiroshima, 2.Biotechnology Study Program, University of Jember)

P017 Evaluation of *Camellia* genetic resources and elucidation of their phylogenetic relationship

☆Fukuyama, K. ¹, H. Katayama ², C. Uematsu ¹ (1.Grad. Sch. Sci., Osaka City Univ., 2.Grad. Sch. Agr., Kobe Univ.)

P018 Genetic relationships among *Camellia* species collected from Southern Vietnam

☆Nguyen, T. ¹, K. Fukuyama ¹, H. Katayama ², C. Uematsu ¹ (1.Grad. Sch. Sci., Osaka City Univ., 2.Grad. Sch. Agr., Kobe Univ.)

P019 Diversity and phylogenetic analysis of 382 melon accessions based on genome wide SNPs data detected by genotyping-by-sequencing

☆Shigita, G. ¹, M. Pervin ¹, P. Tran ¹, H. Nishida ¹, Y. Monden ¹, M. Sugiyama ², K. Tanaka ³, K. Kato ¹ (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.NIVFS, 3.Fac. Agr. Life Sci., Hirosaki U.)

P020 Study on origin of edible water-chestnut by using chloroplast genome

☆Lam, D. ^{1,2}, L. Tang ³, R. Ishikawa ⁴ (1.Unit. Grad. Agri. Sci. Iwate Univ., 2.Inst. Agric. Sci. South. Vin, 3.CAAS, 4.Fac. Agri. Life Sci., Hirosaki Univ.)

P021 Genetic variation of rice germplasm in Cambodia

○Orn, C. ², H. Saito ¹, M. Khan ³, M. Nhuiyan ³, Y. Fukuta ¹ (1.TARF/JIRCAS, 2.CARDI, 3.BRRI)

P022 Molecular discrimination of Japanese main tetraploid grape cultivars based on retrotransposon sequences

Takada, S. ¹, A. Shindo ², Y. Monden ², K. Fujita ¹, ○K. Fukunaga ¹ (1.Fac. Life and Environmental Sci., Pref. U. Hiroshima, 2.Grad. School of Enviromental and Life Sci., Okayama U.)

P023 Effects of panicle spreading on agricultural traits in cultivated rice *Oryza sativa*

☆Kubota, Y., R. Nishioka, K. Numaguchi, T. Ishii, R. Ishikawa (Grad. Sch. Agr. Sci., Kobe Univ.)

P024 Comparison on expression of wheat grain protein content related gene *GPC* between wild and cultivated species

○Sasanuma, T., R. Suto (Fac. Agr., Yamagata Univ.)

P025 Environmental response and effectiveness of selection for total alkaloids in a medicinal plant, *Ephedra sinica* Stapf

☆Hiyama, H. ^{1,2}, A. Ozawa ¹, T. Jinbou ¹, Y. Yoshioka ³, R. Ohsawa ³ (1.TSUMURA & CO., 2.Grad. Sch. Life & Envi. Sci., Univ. Tsukuba, 3.Facul. Life & Envi. Sci., Univ. Tsukuba)

P026 Genetic analysis of essential oil components in *Atractylodes lancea* De Candolle

☆Tsusaka, T. ^{1,2}, B. Makino ¹, Y. Nakai ¹, Y. Watanabe ¹, H. Ezura ³ (1.Tsumura & Co., 2.Grad. Sch. Life & Envi. Sci., Univ. Tsukuba, 3.Facul. Life & Envi. Sci., Univ. Tsukuba)

P027 Development of DNA markers for pepper fruit color and its utilization for breeding

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

P028 Characterization of doubled haploid lines derived from anther culture of F₁ rice plants crossing between Kusahonami and Kita-ake

○Okamoto, Y., T. Wagatsuma (Rakuno Gakuen U.)

P029 Development of isogenic resources combining extra early-maturing gene and short-culm genes in rice Koshihikari

○Obara, Y., M. Tomita (Res. Inst. Green Sci. & Tech., Shizuoka Univ.)

P030 Reference genome sequences of Aus and Indica rice and development of the allele-mining tool integrating DNA polymorphisms among 43 Asian cultivars

○Sakai, H., M. Kumagai, J. Yonemaru, J. Wu (National Agriculture and Food Research Organization)

P031 Effects of Os05g0118700 and Os05g0118900 on glabrous leaf and hull in rice

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

P032 Genome-wide SNP discovery and QTL mapping of flowering and head formation using 4-way-cross population in *Brassica oleracea* L.

○Hatakeyama, K. ¹, K. Shirasawa ², R. Onuki ³, T. Tanaka ^{3,4}, E. Yamamoto ⁵, Y. Katayose ⁴, H. Fukuoka ⁶, S. Matsumoto ⁷, T. Kakizaki ⁷, T. Hayashi ⁴ (1.NIVFS (Present address: Fac. Agri. Iwate Univ.), 2.Kazusa DNA Res. Inst., 3.NAAC, 4.NICS, 5.NIVFS (Present address: Kazusa DNA Res. Inst.), 6.NIVFS (Present address: Takii & Co., Ltd.), 7.NIVFS)

P033 A major QTL (qFT12.1) allele from wild soybean delays flowering time

☆Liu, D. ^{1,2}, Y. Yan ¹, Y. Fujita ^{1,2}, D. Xu ¹ (1.Japan International Research Center for Agricultural Sciences, 2.Graduate School of Life and Environmental Sciences, University of Tsukuba)

P034 Detection of heading date QTLs involved in photoperiod-independent response in a rice cultivar 'Khao Nam Jen'

○Hori, K. ¹, K. Nagata ¹, S. Fukuoka ¹, D. Saisho ², T. Hirayama ², K. Mochida ² (1.NICS, NARO, 2.IPSR, Okayama Univ.)

P035 Construction of linkage map by array marker analysis in bread wheat

☆Suzuki, K. ¹, T. Shimada ¹, Y. Tanaka ², Y. Takenouchi ², H. Enoki ¹, A. Torada ²
(1.TOYOTA MOTOR CORPORATION, 2.HOKUREN Agric.Res. Inst.)

P036 QTL analysis of traits on early heading stage in Chinese cabbage

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

P037 Analysis of traits related to sugar yield in sweet sorghum for biorefinery use

☆Niwa, Y. ¹, S. Nakamura-Araki ², M. Minamiyama ³, K. Shinohara-Ohmae ², H.
Kawaguchi ⁴, K. Miura ⁵, S. Kasuga ⁶, T. Sazuka ² (1.Grad. Sch. Bioagri. Sci., Nagoya
Univ., 2.Biosci. and Biotech. Center, Nagoya Univ., 3.Fac. Agr., Nagoya Univ., 4.Grad. Sch.
Tech. and Innov. Sci., Kobe Univ., 5.Dept. Biosci., Fukui Pref. Univ., 6.AFC, Fac. Agri.,
Shinshu Univ.)

P038 Identification of quantitative trait loci for low-temperature germinability in rice
using next generation sequencing-based bulked segregant analysis

☆Tsuchida, D. ¹, H. Takahashi ², K. Ueda ², K. Sakurai ², A. Watanabe ², T. Kawamoto ³,
H. Akagi ² (1.Grad. Sch. Biores. Sci. Akita Pref. Univ., 2.Akita. Pref. Univ., 3.Akita Pref.
Agri. Exp. Sta.)

P039 Gene expression patterns of alpha-amylase in the endosperm of a rice cultivar
'Akinokirameki'

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

P040 How to choose the optimal population for genome-wide association study?:
Simulation study using whole genome sequence of rice genetic resources

☆Hamazaki, K. ¹, H. Kajiya-Kanegae ¹, M. Yamasaki ², K. Ebana ³, S. Yabe ⁴, H.
Nakagawa ⁵, 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, 4.Institute of Crop Science, NARO, 5.Institute for Agro-Environmental
Sciences, NARO)

P041 Improvement of rice heading date and grain thickness by pyramiding QTLs in the Tentakaku genetic background

☆Yamaguchi, T. ¹, R. Mizobuchi ², F. Taguchi ², S. Fukuoka ², N. Kitazawa ², Y. Iyama ³, K. Fujita ⁴ (1.Toyama Pref. Agr. For. Fis. Res. Cent., 2.NARO, 3.Takaoka Agr. For. Prom. Cent., 4.Niikawa Agr. For. Prom. Cent.)

P042 Estimation of divergence time between the X and Y chromosomes of *Spinacia oleracea*

Okazaki, Y. ², H. Hirakawa ³, Y. Suzuki ⁴, O.Y. Onodera ¹ (1.Research Faculty of Agriculture, Hokkaido University, 2.Graduate School of Agriculture, 3.Kazusa DNA Research Institute, 4.Graduate School of Frontier Sciences, The University of Tokyo)

P043 Reaction Analysis of Plants with Environmental Stress in River Basin

☆Sim, J. (Sophia Univ.)

P044 Mechanistic analysis of the epigenetic regulator EDM2 and its interactor ubiquitin E3 ligase in *Arabidopsis* disease resistance

☆Watanabe, R. ¹, T. Tuchiya ² (1.Grad. Sch. ALS., Nihon Univ., 2.Coll. Biores. Sci., Nihon Univ.)

P045 Functional analysis of apomixis specific genes: Plant regeneration and its functional analysis within transgenic rice of hsp::*ASG-1*::GFP

○Chen, L. ^{1,2}, R. Kaneko ², D. Toyomoto ¹, Y. Nishimura ¹, K. Yoshida ³, T. Tetsumura ⁴, T. Sugita ², D. Kurihara ⁵, T. Higashiyama ⁵ (1.Grad. Sch. Hort. & Food Sci., Minami Kyushu U., 2.Fac. Envir. & Hort. Sci., Minami Kyushu U., 3.Fac. Agri., U. Tokyo, 4.Fac. Agri., Miyazaki U., 5.Fac. Sci., Nagoya U.)

P046 Genome editing of all *TaQsd1* homoeologous genes using CRISPR/Cas9 in bread wheat: 3. Trait evaluation of homozygous edited lines

☆Haque, E. ¹, F. Abe ¹, T. Hayashi ¹, H. Hisano ², T. Tanaka ¹, Y. Kamiya ³, K. Kawaura ³, K. Sato ² (1.Inst. Crop Sci., NARO, 2.ISPR, Okayama Univ., 3.KIBR, Yokohama City Univ.)

P047 Canceled

P048 Spatio-temporal analysis of *LORE1* LTR promoter activity

○Fukai, E. ¹, S. Ono ², K. Nonomura ², K. Okazaki ¹ (1.Grad. Sch. Sci. Tech., Niigata Univ., 2.Exp. Farm, Natl. Inst. Genet.)

P049 Methylome analysis in *Brassica rapa*

Takahashi, S. ², K. Osabe ³, N. Miyaji ¹, Y. Suzuki ⁴, M. Seki ², ○R. Fujimoto ¹ (1.Grad. Sch. Agric. Sci., Kobe Univ, 2.RIKEN, 3.OIST, 4.Grad. Sch. Front. Sci., Univ. Tokyo)

P050 Reversion of cosuppression phenotype mediated by an interaction between epialleles of transgene

☆Kimura, M., H. Nagasawa, A. Kanazawa (Res. Fac. Agr., Hokkaido Univ.)

P051 Phenotype characterization of transplastomic tobacco that contains divided chloroplast genome and the expression analysis of its transcripts and proteins

☆Uemura, K. ¹, T. Takami ², Y. Kato ², W. Sakamoto ², T. Terachi ¹ (1.Fac. Life Sci., Kyoto Sangyo Univ., 2.Inst. Plant Sci. Res., Okayama Univ.)

P052 Comparative chloroplast genome analysis of two alloplasmic lines of common wheat with *Aegilops mutica* cytoplasm showing different phenotype

☆Yamashita, K. ¹, M. Tsujimura ², K. Kaminoyama ³, S. Kimura ³, T. Terachi ³ (1.Grad. Sch. Life Sci., Kyoto Sangyo U., 2.Kyoto Sangyo U., Plant Organelle Genomics R. C., 3.Fac. Life Sci., Kyoto Sangyo U.)

P053 Small RNA sequencing reveals a role of pearl millet miRNAs and their targets in salinity stress tolerance

☆Shinde, H. ¹, A. Dudhate ¹, D. Tsugama ², S. Gupta ³, S. Liu ⁴, T. Takano ¹ (1.The University of Tokyo, Asian Natural Environmental Science Center, The Laboratory of Environmental Stress Tolerance, 2.Res. Fac. Agri., Univ. Hokkaido, 3.International Crop Research Institutes of Semi-arid Tropics (ICRISAT), India, 4.Zhejiang A and F Univ. Hangzhou, China)

P054 Transcriptome analysis of tuberous stem of kohlrabi

Hoque, M. ^{1,2}, D. Shea ^{1,3}, ☆M. Sato ¹, R. Matsumura ¹, M. Doullah ², M. Shimizu ⁴, R. Fujimoto ⁵, E. Fukai ¹, K. Okazaki ¹ (1.Grad. Sch. Sci. Univ. Niigata, 2.Grad. Sch. Agri. Sylhet, 3.NARO. Mie, 4.IBRC. Iwate, 5.Grad. Sch. Sci. Univ. Kobe)

P055 Hayai-Annotation: five levels of high-accurate ultra-fast gene annotation in plant

○Ghelfi, A., K. Shirasawa, H. Hirakawa, S. Isobe (Kazusa DNA Res Inst)

P056 Update of the omics databases PODC, TOMATOMICS and CatchUP

○Koshimizu, S. ¹, Y. Nakamura ¹, T. Kudo ¹, M. Saito ¹, M. Kanno ¹, K. Aoki ², E. Nambara ³, K. Yano ¹ (1.Sch. Agri., Meiji Univ., 2.Grad. Sch. Life Environ. Sci., Osaka Pref. Univ., 3.Sch. Cell & Systems Biol., Toronto Univ.)

P057 RAP-DB: Rice Annotation Project Database

○Kawahara, Y. ^{1,2}, T. Hirozane-Kishikawa ², X. Wang ¹, H. Wakimoto ³, T. Itoh ² (1.Institute of Crop Science, NARO, 2.Advanced Analysis Center, NARO, 3.BITS. Co., Ltd.)

P058 Characterization of Phytophthora rot resistance in Japanese soybean cultivars on the basis of results of inoculation experiments

○Takahashi, M. ¹, J. Matsuoka ¹, T. Yamada ², Y. Kouno ¹, N. Yamada ³, K. Takahashi ², J. Moriwaki ⁴, H. Akamatsu ¹ (1.Central Region Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO, 3.Nagano Vegetable and Ornamental Crops Experiment Station, 4.Kyushu Okinawa Agricultural Research Center, NARO)

P059 Analysis of several resistance genes to Phytophthora sojae in the soybean cultivar "Tousan231"

☆Matsuoka, J. ¹, M. Takahashi ¹, T. Yamada ², N. Yamada ³, Y. Kouno ¹, K. Takahashi ², J. Moriwaki ⁴, H. Akamatsu ¹ (1.Central Region Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO, 3.Nagano Vegetable and Ornamental Crops Experiment Station, 4.Kyushu Okinawa Agricultural Research Center, NARO)

P060 Relationship between defense priming and sustained upregulation of WRKY transcript levels induced by *Hyaloperonospora arabidopsidis* infection in *Arabidopsis*

☆Sukaoun, K. ¹, T. Tsuchiya ² (1.Grad. Sch. ALS., Nihon Univ., 2.Coll. Biores. Sci., Nihon Univ.)

P061 Variations in glucosinolate content and degree of resistance to diamondback moth in feral *Brassica napus* existed around the ports in Japan

☆Yanagi, E., M. Tsuda, S. Matsuyama, Y. Kainoh, R. Ohsawa (Grad. Sch. Life and Env. Sci., Univ. Tsukuba)

P062 Response for the susceptible rice varieties to three kinds of 4-HPPD inhibitory herbicide

○Murata, K. ¹, H. Ozaki ¹, A. Yamazaki ², K. Sekino ², S. Suzuki ², H. Maeda ³, H. Katou ⁴, F. Li ⁵, H. Yoshida ⁶, S. Hirose ⁶, A. Komatsu ⁶, Y. Tozawa ⁷, M. Kuroki ⁵ (1.Toyama Pref. Agr. Fores. Fish. Res. Cent., 2.SDS Biotech K.K., 3.NARC, NARO, 4.GRC, NARO, 5.Inst. Crop Sci., NARO, 6.NIAS, NARO, 7.Saitama Univ.)

P063 ABA sensitivity of wheat seedlings effect on seed dormancy

○Matsunaka, H., K. Nakamura, T. Sakai (KARC/NARO)

P064 QTLs for seedling vigor under low temperatures, ABA insensitivity and culm length in rice

○Sato, Y. ^{1,2}, K. Fujimura ², K. Fujino ¹ (1.NARO Hokkaido Agricultural Research Center, 2.Grad. Sch. Agr. Univ. Hokkaido)

P065 QTL mapping of tolerance for internal browning in radish by ddRAD-seq

○Kakizaki, T. ¹, K. Seki ², H. Okada ³, E. Itabashi ¹, N. Fukino ¹, T. Ohara ¹ (1.Institute of Vegetable and Floriculture Science, NARO, 2.Nagano Vegetable and Ornamental Crops Experiment Station, 3.The Yokohama Nursery Co., Ltd.)

P066 GWAS and comparative transcriptome analysis identified aluminum tolerance gene and expression level polymorphism in *Arabidopsis thaliana* accessions

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

P067 Comparative metabolite profiling of pearl millet for drought and salinity stress response

☆Dudhate, A. ^{1,2}, H. Shinde ^{1,2}, D. Tsugama ³, G. Shashi K ⁴, S. Liu ⁵, T. Takano ^{1,2} (1.The University of Tokyo, Asian Natural Environmental Science Center, The Laboratory of Environmental Stress Tolerance, 2.Graduate School of Agricultural and Life Science, Univ. Tokyo, 3.A Laboratory of Crop Physiology, Research Faculty of Agriculture, Hokkaido University, Sapporo-shi, Hokkaido, Japan, 4.International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad, Telangana State, India, 5.Northeast Forestry, Univ. China)

P068 Dissecting the behavior of heat-induced long distance signal in plant

○Hirata, A. (Sophia University)

P069 Screening for drought tolerant lines in NBRP-wheat core collection

☆Ahmadzai, W. ¹, M. Safi ¹, S. Takenaka ², M. Nitta ³, S. Nasuda ³, K. Kawaura ¹
(1.KIBR, Yokohama City U., 2.Fac. Agrc., Ryukoku Univ., 3.Grad. Sch. Agr., Kyoto U.)

P070 Variation in response to salt stress among NBRP-wheat core collection

☆Safi, M. ¹, W. Ahmadzai ¹, S. Takenaka ², M. Nitta ³, S. Nasuda ³, K. Kawaura ¹
(1.KIBR, Yokohama City U., 2.Fac. Agrc., Ryukoku Univ., 3.Grad. Sch. Agr., Kyoto U.)

P071 Breeding of near-isogenic lines of bread wheat cv. "Yumeshiho" with different vernalization requirement and their growth characteristics

○Fujita, M. ¹, M. Tougou ¹, T. Takayama ^{1,2}, C. Otobe ¹, H. Nishida ³, K. Kato ³
(1.Institute of Crop Science, NARO, 2.Tohoku Agricultural Research Center, NARO, 3.Grad. Sch. Environ. Life Sci., Okayama Univ.)

P072 Agronomic characteristics of *Sorghum bicolor* var. K8 depending on different cultivation methods and environments

Miyatake, C. ¹, M. Seki ², S. Sugihara ², H. Miyazaki ³, ○R. Araki ¹ (1.Dept. Edu., Wakayama Univ., 2.Grad. Sch. Agr., Tokyo Univ. Agr. Tech., 3.Natl. Mus. Ethnol.)

P073 Root system analysis of soy core collection using Tottori sand dune field

☆Naruse, T. ¹, H. Takahashi ¹, K. Hirano ¹, Y. Toda ², Y. Omori ², M. Tsuda ³, A. Kaga ⁴, H. Tsujimoto ⁵, Y. Sawada ⁶, T. Fujiwara ², H. Iwata ², M. Matsuoka ¹, M. Nakazono ¹
(1.Grad. Sch. Bioagri. Sci., Univ. Nagoya, 2.Grad. Sch. Agr. Life Sci., Univ Tokyo, 3.Grad. Sch. Life & Env. Sci., Univ. Tsukuba, 4.NICS, 5.Arid Land Res. Ctr., Tottori Univ., 6.RIKEN)

P074 Analysis of Cl⁻ contents of shoots and roots of rice toward uncovering Cl⁻ transport/distribution systems that function under salt stress

☆Sato, K. ¹, T. Ito ², R. Ishikawa ³, T. Ishii ³, T. Horie ² (1.Grad. Sch. Bio., Univ. Shinshu, 2.Sch. Tex. Bio., Univ. Shinshu, 3.Grad. Sch. Agr. Sci., Univ. Kobe)

P075 Genetic analysis for panicle development in rice under environmental stress conditions

☆Agata, A. ¹, T. Hobo ², S. Ota ¹, S. Nishiuchi ^{1,3}, K. Doi ¹, Y. Inukai ⁴, D. Makihara ⁴, H. Kitano ² (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Biosci. Biotec. Ctr., Nagoya U., 3.PRESTO JST, 4.ICCAE, Nagoya U.)

P076 Yield performance of Kernel Basmati lines Introgressed with TAWAWA1, APO1 and Ehd1 genes grown with and without fertilizer, in Kenya

☆Gichuhi, E. ^{1,7}, M. Maekawa ^{2,7}, M. Kikuta ^{5,7}, H. Samejima ^{6,7}, D. Menge ^{1,7}, J. Kimani ^{1,7}, D. Makihara ^{3,7}, A. Yamauchi ^{4,7} (1.Kenya Agricultural and Livestock Research Organization (KALRO) ICRC, Mwea, 2.Institute of Plant Science and Resources (IPSR), Okayama University, 3.International Center for Research and Education in Agriculture (ICREA), Nagoya University, 4.Graduate School of Bioagricultural Sciences, Nagoya University, 5.Applied Social System Institute of Asia, Nagoya University, 6.Graduate School of Agricultural Science, Kobe University, 7.JST/JICA SATREPS)

P077 The effects of planting periods on yeild and quality in sweetpotato for table use

○Nishinaka, M., K. Katayama, T. Kuranouchi, Y. Nakamura (Institute of Crop Science, NARO)

P078 Influence on chalky grain including white-core grain by grain size QTLs identified from Yamadanishiki, a brewing rice cultivar

☆Okada, S. ^{1,2}, M. Yamasaki ² (1.JSPS Research Fellow, 2.Food Resources Education and Research Ctr., Grad. Agric. Sci., Kobe U.)

P079 Expression analysis of seed storage proteins in the chromosome 4E disomic addition common wheat line of *Thinopyrum elongatum* with weak dough

☆Miyamoto, K., T. Kodani, H. Tanaka (Fac. Agr., Tottori Univ.)

P080 Variations of hardness of rice cake in various populations from crosses between nonglutinous and glutinous varieties

☆Doman, K. ¹, H. Sato ^{1,2}, T. Maekawa ¹, M. Kinoshita ^{1,2}, Y. Hirayama ¹ (1.Kamikawa Agri. Exp. Stn., HRO, 2.Central Agri. Exp. Stn., HRO)

P081 New method for evaluating texture of cooked rice using RVA canister

○Ashida, K. (Hokkaido Agricultural Research Center, NARO)

P082 Isolation of the *PcoEgt1* gene mutants from "Tamogitake" mushroom, *Pleurotus cornucopiae* var. *citrinopileatus*, mutant library by TILLING

○Matsumoto, T. ¹, S. Yoneyama ², T. Azuma ³, M. Sato ², S. Saitoh ², T. Tomiyama ⁴
(1.Fac. of Agr., Univ. of Tottori, 2.Forest Products Res. Inst., Hokkaido Res. Org.,
3.Hokkaido Res. Org., 4.Three B Co., Ltd.)

P083 Improvement of crop yield on acidic soil by coal ash granule in Indonesia

○Hashida, S. ¹, F. Nashirotn Nisya ², E. Warsiki ², H. Agusta ² (1.Env. Sci. Res. Lab.,
CRIEPI, 2.SBRC, IPB)

P084 Comparative analysis of genome sequences in order to elucidate the molecular mechanisms of heterosis during early growth in sugar beet

○Kitazaki, K., M. Ohkubo, T. Kubo (Research Faculty of Agriculture, Hokkaido University)

P085 Comprehensive analysis of phenotypes exhibits morphological characteristics associated with heterosis during early growth in sugar beet

☆Ohkubo, M., T. Kubo, K. Kitazaki (Grad. Sch. Agr., Univ. Hokkaido)

P086 Evaluation of adventitious roots differentiation abilities from stem sections in tea genetic resources

☆Hiroto, Y. ^{1,2}, H. Nagae ², T. Uchida ², H. Katai ³, A. Morita ², T. Ikka ² (1.Uni. Grad.
Sch. of Agr. Sci., Gifu Univ., 2.Fac. of Agr., Shizuoka Univ., 3.Tea Res. Cen., Shizuoka
Pref.)

P087 Exploration of genes involved in rice leaf development using expression analysis

☆Miya, M. ¹, T. Yoshikawa ², Y. Sato ³, Y. Nagamura ³, J. Ito ¹ (1.University of Tokyo,
Faculty of Agriculture, 2.Grad. Sch Agr., Kyoto Univ., 3.Institute of Crop Science, NARO)

P088 The effects of CYP78 involved in the developmental control on rice calli

☆Hatta, T. ¹, I. Mizuno ¹, K. Hibara ², J. Itoh ¹ (1.Grad. Sch. Agr. & Life Sci., U-Tokyo,
2.Dep. Agri. Region. Reclama., Kibi Int. Univ.)

P089 Functional analysis of gibberellin in the development rhizome buds of *Oryza longistaminata*, a wild rice species from Africa

○Hobo, T. ¹, K. Bessho-Uehara ¹, A. Agata ¹, T. Omori ¹, H. Konodo ¹, R. Stefan ¹, T. Furuta ¹, T. Kawahara ¹, T. Hachiya ¹, H. Sakakibara ², M. Ashikari ¹ (1.Biosci. Biotech. Ctr., Nagoya U., 2.RIKEN)

P090 Analysis of compensatory growth of lateral roots responding to excision of seminal root tip in rice

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

P091 A monosomic addition derived from *Diplotaxis tenuifolia* is essential for *Brassica rapa* carrying *D. tenuifolia* cytoplasm

☆Fujita, Y. ^{1,2}, T. Hayashi ¹, S. Shim ¹, T. Ohnishi ^{1,3}, S. Bang ¹ (1.Sch. Agric., Utsunomiya. Univ., 2.United Grad. Sch. Agr., Tokyo Univ., 3.PREST, JST)

P092 Screening of chemicals that prevent the reduction of seed longevity after priming

Sano, N. ^{1,2}, ○M. Seo ¹ (1.RIKEN CSRS, 2.Institut Jean-Pierre Bourgin, INRA, AgroParis-Tech, Universite Paris-Saclay)

P093 Characterization of the dormancy in seeds of the indica rice cultivar "Habataki"

☆Yoshinaga, M. ¹, T. Oshima ¹, K. Ikeda ¹, K. Murata ², T. Yamada ¹, M. Kanekatsu ¹ (1.Grad. Sch. Agr., Tokyo U. Agr. Tec., 2.Toyama Pref. Agr. Forest. Fish. Res. Cen.)

P094 Search for novel mitochondrial genes up-regulated by vernalization in the alloplasmic line which shows late-flowering phenotype

☆Tanaka, E. ¹, T. Terachi ², K. Murai ¹ (1.Fac. Biosci. Biotech., Fukui Pref. U., 2.Fac. Life Sci., Kyoto Sangyo U.)

P095 Promotion of Hd1 on flowering time under long daylength conditions in rice

○Fujino, K., U. Yamanouchi, Y. Nonoue, M. Yano (NARO)

P096 Transcriptome analysis on age-dependent vernalization response in cabbage

☆Itabashi, E. ¹, D. Shea ², N. Fukino ¹, R. Fujimoto ³, K. Okazaki ², T. Kakizaki ¹, T. Ohara ¹ (1.Inst. Veg. Flor. Sci., NARO, 2.Grad. Sch. Sci. Tech., Niigata Univ., 3.Grad. Sch. Agric. Sci., Kobe Univ.)

P097 Differences of young spike development and heading time among barley near-isogenic lines for photoperiod response

○Aoki, E. ¹, M. Seki ², H. Nishida ³, K. Kato ³, T. Yanagisawa ¹ (1.NARO/NICS, 2.NARO/CARC, 3.Grad. Sch. Environ. Life Sci., Okayama U.)

P098 Effects of genotypes for vernalization and photoperiod response on barley heading time at three sites in Japan

○Seki, M. ¹, E. Aoki ², T. Yoshioka ³, H. Nishida ⁴, H. Aoki ¹, T. Yanagisawa ², A. Takahashi ³, M. Nakata ¹, T. Nagamine ¹, K. Kato ⁴ (1.NARO/CARC, 2.NARO/NICS, 3.NARO/WARC, 4.Grad. Sch. Environ. Life Sci., Okayama U.)

P099 Comparative imaging analysis of amyloplasts in rice and barley endosperm

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

P100 Photoprotection of PSI by far-red light against the fluctuating light-induced photoinhibition in land plants

☆Kono, M. ¹, W. Yamori ¹, Y. Suzuki ², I. Terashima ¹ (1.Sch. Sci. Univ. Tokyo, 2.Sci. Kanagawa Univ.)

P101 Impact of rice-husk biochar, *Bacillus pumilus* TUAT-1 and their combination on soil microbial community and plant growth in forage rice

☆Win, K. ¹, Y. Ohwaki ¹, K. Okazaki ¹, T. Kenjo ², T. Asano ², N. Ohkama-Ohtsu ³, T. Ookawa ³, T. Yokoyama ³ (1.Central Region Agricultural Research Center, NARO, 2.Asahi Industries Co., LTD., 3.Tokyo University of Agriculture and Technology)

P102 Broadening the genetic variation in gentians by interspecific hybridization between cultivated and wild species

☆Takamura, Y. ^{1,2}, R. Takahashi ², T. Hikage ², K. Hatakeyama ¹, Y. Takahata ¹ (1.Fac. Agri., Iwate Univ., 2.Hachimantai City Floricultural R & D Center)

P103 Inheritance pattern of incompatibility alleviation by high-temperature treatment in interspecific cross in *Cucumis*

☆Shirakawa, A. ¹, S. Arima ², Y. Nagano ³, Y. Matsumoto ² (1.Grad. Sch. Agr. Sci., Saga Univ., 2.Fac. Agr., Saga Univ., 3.Ana. Res. Cen., Saga Univ.)

P104 Research of mutant rice accumulates sugar in seed-like tissue

○Honma, Y. (Kitami Institute of Technology)
