

Title of Papers Presented at the 132nd Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 Identification of heading-date QTL responding to day-length changes in barley

○Handa, H. ¹, D. Saisho ² (1.Institute of Crop Science, NARO, 2.IPSR, Okayama U.)

102 Genome-wide association study of pedicellate spikelet development in Sorghum

☆Shichijo, M. ¹, H. Takanashi ¹, M. Fujimoto ¹, H. Kanegae ¹, M. Ishimori ¹, M. Kobayashi ², K. Yano ², K. Yamazaki ¹, T. Fujiwara ¹, J. Yoneda ³, T. Tokunaga ³, H. Iwata ¹, N. Tsutsumi ¹ (1.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 2.Sch. Agric., Meiji Univ., 3.EARTHNOTE Co., Ltd.)

103 Detection of loci associated with tip structure of Sorghum glume hair

☆Miwa, Y. ¹, M. Shichijo ¹, H. Takanashi ¹, M. Fujimoto ¹, H. Kanegae ¹, M. Ishimori ¹, M. Kobayashi ², K. Yano ², K. Yamazaki ¹, T. Fujiwara ¹, J. Yoneda ³, T. Tokunaga ³, R. Hijiya ⁴, N. Ohnishi ⁴, W. Sakamoto ⁴, H. Iwata ¹, N. Tsutsumi ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Fac. Agr., Meiji Univ., 3.EARTHNOTE Co., Ltd., 4.Inst. Plant Sci. Res., Okayama Univ.)

104 The non-functional allele bmr18 of COMT of the lignin biosynthesis pathway might reduce the regrowth ability in sorghum

○Yonemaru, J. ¹, S. Kasuga ², H. Kawahigashi ¹ (1.NARO, Institute of Crop Science, 2.Shinshu University, Faculty of Agriculture, AFC)

105 New marker technology, GRAS-Di, using next generation sequencer

○Enoki, H. (Toyota Motor Corporation, Biotechnology & Afforestation Laboratory)

106 Identification of a mutation associated with reduced seed shattering in rice by combining bulked seargeant analysis with whole genome sequencing

☆Li, F. ¹, H. Numa ², N. Nara ³, S. Niwa ¹, N. Sentoku ³, T. Ishii ¹, Y. Fukuta ⁴, N. Nishimura ¹, H. Kato ¹ (1.Rad. Breed. Div., Inst.Crop Sci., NARO, 2.Advanced Analysis Center, NARO, 3.Institute of Agrobiological Science, NARO, 4.TARF, JIRCAS)

107 QTLs for anaerobic germination and coleoptile elongation detected by using a set of reciprocal Koshihikari/IR64 CSSLs

☆Kuya, N., K. Iijima, K. Nagata, S. Fukuoka, T. Yamamoto (Institute of Crop Science, NARO)

108 Analysis on the quantitative trait loci for the yield and lodging resistance associated traits in rice

☆Nomura, T. ¹, T. Yamamoto ², T. Ueda ², J. Yonemaru ², A. Abe ³, H. Takagi ⁴, S. Adachi ¹, T. Hirasawa ¹, T. Ookawa ¹ (1.Graduate School of Agriculture, Tokyo University of Agriculture and Technology, 2.Institute of Crop Science, NARO, 3.Iwate Biotechnology Research Center, 4.Bioresources and Environmental Sciences, Ishikawa Prefectural University)

109 Genome sequencing of an Arabidopsis T-DNA insertion mutant using MinION sequencer

○Takahashi, H., K. Ueda, K. Sakurai, A. Watanabe, H. Akagi (Fac. Biores. Sci., Akita Pref. U.)

110 Polymorphic analysis in Brassica and Raphanus species by dd-RAD-Seq

○Isobe, S., K. Shirasawa, H. Hirakawa (Kazusa DNA Research Institute)

111 Genome-wide SNPs and genetic diversity in *Raphanus* accessions

○Kitashiba, H. ¹, K. Shirasawa ², H. Kobayashi ¹, T. Nishio ¹ (1.Grad. Sch. Agri. Sci., Tohoku Univ., 2.Kazusa DNA Res. Inst.)

112 Map-based integration of the independently-released genome sequences of radish

○Shirasawa, K. ¹, H. Kitashiba ² (1.Kazusa DNA Res. Inst., 2.Grad. Sch. Agric. Sci., Tohoku U.)

113 Genomic prediction for grain weight distribution aiming at improving grain-filling rate in Japanese rice cultivars

☆Yabe, S. ^{1,2}, H. Yoshida ³, H. Kajiya-Kanegae ⁴, M. Yamasaki ⁵, H. Iwata ⁴, K. Ebana ⁶, T. Hayashi ¹, H. Nakagawa ³ (1.Institute of Crop Science, NARO, 2.PRESTO, JST, 3.Institute for Agro-Environmental Sciences, NARO, 4.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 5.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe Univ., 6.Genet. Res. Cent., NARO)

114 Expression analysis of *PnCO*, which is the candidate gene of QTL for flowering days in *Ipomoea nil*

☆Katsuyama, H. ¹, M. Ono ², T. Kuboyama ¹ (1.Col. Agr. , Ibaraki U., 2.T-PIRC Gene Research Center, Grad. Life and Env. Sci., Univ. Tsukuba)

115 QTL mapping of female flower frequency in bitter gourd (*Momordica charantia*)

☆Miyake, M. ¹, S. Suzuki ², M. Fukushima ², N. Taniai ³, N. Miyagi ³, K. Taroura ³, N. Urasaki ³, H. Matsumura ⁴ (1.Grad. Sch. Sci. Tech., Shinshu Univ., 2.Grad. Sch. Sci. Tech., Shinshu Univ., 3.Okinawa Pref. Agric. Res. Ctr., 4.Gene Res. Ctr., Shinshu Univ.)

116 Effect of *Hd16* and *Hd18* type on heading time of rice (*Oryza Sativa*) in Fukuoka prefecture

○Ishibashi, M., K. Miyahara, o. yamaguchi (Fukuoka Agric. Forest. Res. Cent.)

117 Molecular analysis of genetic factors responsible for late heading phenotype in rice mutant of *t65/late*

☆Yoshitsu, Y. ¹, K. Ichitani ², K. Hatakeyama ¹, Y. Takahata ¹, S. Yokoi ³ (1.Fac. Agri., Iwate Univ., 2.Fac. Agri., Kagoshima Univ., 3.Grad. Sch. Lif. Envi. Sci., Osaka Pref. Univ.)

118 Investigation of the genomic region associated with yield of soybean variety, 'Fukuibuki'

☆Hirata, K. ¹, S. Kato ¹, T. Yamada ², E. Ogiso-Tanaka ², M. Ishimoto ², A. Kikuchi ¹ (1.Tohoku Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO)

119 Development of SNP-based PCR markers for screening root-knot nematode (*Meloidogyne incognita*) resistance based on genome-wide polymorphisms in sweetpotato

☆Sasai, R. ¹, K. Kishimoto ¹, K. Shirasawa ², H. Tabuchi ³, Y. Okada ³, A. Kuramoto ⁴, A. Kobayashi ³, S. Isobe ², M. Tahara ¹, Y. Monden ¹ (1.Grad. Sch. Env. & Life Sci., Okayama Univ., 2.Kazusa DNA Res. Inst., 3.KONARC, 4.Grad. Sch. Agri., Kyoto Univ.)

120 Estimation of blast resistance genes that confer race-specific resistance in rice using DNA marker

○Nonoue, Y., H. Sato, T. Ishi (NARO, Inst. of Crop Sci.)

121 The 'Awa-akamai' allele of qESS11 contributes to improvement of cold tolerance at the booting stage in rice

☆Yamaguchi, T. ¹, Y. Kawahara ², S. Nakajo ³, T. Endo ⁴, Y. Ishimori ⁴, Y. Iyama ¹, K. Syoji ¹ (1.Toyama Pref. Agr. For. Fis. Res. Cent., 2.NARO, 3.Iwate Agr. Res. Cent., 4.Miyagi. Pref. Furukawa Agr. Exp. St.)

122 Development of diplospory linked markers in tetraploid Chinese chive

Wakamasu, M. ¹, K. Taguchi ¹, Y. Nakazawa ¹, K. Tasaki ¹, H. Hirakawa ², S. Isobe ², K. Iimura ¹, M. Amagai ¹, N. Matsumoto ¹, K. Oshima ¹, ○K. Namai ¹ (1.Tochigi Pref. Agri. Exp. Stn., 2.Kazusa DNA Res. Inst.)

201 A component of Polycomb complex EMF2, binds to the intron of flowering promoter gene *VRN1* in wheat

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

202 *VRN1* protein directly binds to the promoter region of florigen gene *WFT*

Tanaka, C. ¹, T. Itoh ¹, Y. Iwasaki ¹, N. Mizuno ², S. Nasuda ², ○K. Murai ¹ (1.Dep. Biosci., Fukui Pref. Univ., 2.Grad. Sch. Agr., Kyoto Univ.)

203 Geographical distribution and origin of early-flowering alleles for novel earliness genes *PCL1-3A* and *PCL1-3D* in wheat

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

204 Identification of genes for sham ramification in wheat

☆Mitsuhashi, Y. ¹, S. Sakuma ^{2,3}, K. Kawaura ¹ (1.KIBR, Yokohama City U., 2.Tottori U., 3.IPK)

205 Effects of the cytoplasm from wild relative specie *Aegilops mutica* on the expression patterns of flowering genes in Japanese wheat cultivars

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

206 Effect of a novel earliness QTL in barley chromosome 2H on expression of flowering-related genes detected by RNA-seq analysis

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

207 Developmental process of the shoot apex of wild and cultivated barleys under field conditions

☆Ito, J. ¹, D. Saisho ², H. Tsuji ¹ (1.KIBR, Yokohama City Univ., 2.IPSR, Okayama U.)

208 Factors influencing annual field heading date in barley genetic resources

○Ishii, M. ¹, K. Sato ¹, K. Mochida ^{1,2,3}, K. Takahagi ^{2,3}, K. Inoue ² (1.IPSR, Okayama Univ., 2.CSRS, RIKEN, 3.KIBR, Yokohama City Univ.)

209 Unfertilized ovary pushes wheat flower open for cross-pollination

○Okada, T. (Univ. Adelaide)

210 Effect of BvBTC1 on early bolting control in biennial sugar beet assessed by a segregating population

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

211 Dynamic DNA methylation reconfiguration during seed development and germination

○Kawakatsu, T. (NIAS)

212 Insensitivity to fluctuating light governed by NADP status in chloroplast

☆Hashida, S. ¹, A. Miyagi ², M. Kawai-Yamada ² (1.Environ. Sci., CRIEPI, 2.Sci. Tech., Saitama Univ.)

213 Factors inhibiting pod-setting under long day condition in soybean

☆Harigai, K. ¹, R. Takeshima ², T. Yamada ¹, F. Kong ³, J. Abe ¹ (1.Grad. Sch. Agric., Hokkaido U., 2.Inst. Crop Sci., NARO, 3.Chinese Academy of Science)

214 A dysfunctional allele at an E1-like locus is involved in flowering under long day condition in soybean

☆Zhu, J. ¹, M. Xu ¹, R. Takeshima ², K. Harigai ¹, T. Yamada ¹, J. Abe ¹ (1.Graduate School of Agriculture, Hokkaido University, 2.Inst. Crop Sci., NARO)

215 The effect of *E2* and *E3* loci on juvenile-adult phase change in soybean

☆Ozawa, S. ^{1,2}, A. Kaga ³, K. Hatakeyama ¹, Y. Takahata ¹ (1.Fac. Agr., Iwate Univ., 2.Iwate Agr. Res. Cent., 3.Institute of Crop Science, NARO)

216 Undifferentiated chlorosis leaves in alloplasmic line

☆Sunaga, K. ¹, Y. Fujita ^{1,2}, T. Ohnishi ^{3,4}, S. Bang ¹ (1.Fac. Agric., Utsunomiya. Univ., 2.United Grad. Sch. Agr., Tokyo Univ., 3.CERCC, Utsunomiya. Univ., 4.PREST, JST)

217 Genetic mapping and physiological characterization of necrotic mutants in rice (*Oryza sativa* L.)

☆Mbaraka, S., Y. Yamagata, A. Yoshimura, H. Yasui (Faculty of Agriculture, Graduate School, Kyushu University)

218 The analysis of the mechanism deciding the ratio between the leaf blade and the sheath in rice

☆Shiga, T., T. Toriba, H. Tokunaga, S. Naramoto, J. Kyojuka (Grad. Sch., Life Sci., Tohoku Univ.)

219 Analysis of regulation and diversity of water-repellency in rice leaf

☆Hiraiwa, A. ¹, S. Aiga ¹, Y. Sato ², J. Itoh ¹ (1.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 2.Natl. Inst. Genet.)

220 Identification of the *MINIATURE FLORAL ORGANS* gene involved in floral organ size determination in rice

○Yoshida, H. ¹, F. Lombardo ¹, T. Akiyama ¹, Y. Sato ² (1.Inst Agrobiological Sci, NARO, 2.Natl Inst Genetics)

221 Analysis of mechanism regulating embryo/endosperm size ratio in rice

☆Kanagawa, M. ¹, K. Matsumoto ², R. Ishikawa ², J. Itoh ¹, K. Hibara ¹
(1.Grad.Sch.Agric.Life Sci., U.Tokyo, 2.Grad.Sch.Agric.Sci., U.Kobe)

222 Functional analysis of KNOX1-like gene in *Trifolium repens* L.

☆Ueno, M., M. Makuchi, H. Ohashi, Y. Saitoh (Cryobiofrontier Reseach Center, Fac. Agri, Univ. Iwate)

301 T insertion in soybean *RXP* gene causes durable resistance to soybean bacterial pustule

○Taguchi-Shiobara, F. ¹, K. Takahashi ¹, R. Suzuki ², Y. Yokota ¹, T. Shimizu ¹, T. Yamazaki ², T. Yamada ¹, E. Ogiso-Tanaka ¹, T. Sayama ^{1,3}, N. Yamada ^{1,4}, N. Oki ⁵, T. Anai ⁶, Y. Katayose ¹, A. Kaga ¹, M. Ishimoto ¹ (1.NICS/NARO, 2.AAC/NARO, 3.WARC/NARO, 4.Nagano Vegetable and Ornamental Crops Exp. Sta., 5.KARC/NARO, 6.Saga Univ.)

302 Rice blast resistance gene *Pita-2* is allelic to *Pi19*, but not to *Pita*

○Takahashi, A. ¹, N. Hayashi ¹, H. Hirochika ² (1.Institute of Agrobiological Sciences, NARO, 2.National Institute of Agrobiological Sciences)

303 Canceled

304 Expression analysis of siRNA derived from ERTBVL sequence using Asian and African rice species

☆Saito, N. ¹, J. Encabo ², K. Utsu ¹, Y. Koide ¹, I. Choi ², Y. Kishima ¹ (1.Grad. Sch. Agr., Univ. Hokkaido, 2.International Rice Research Institute)

305 Fine mapping of the clubroot resistance gene *Crr1b* in *Brassica rapa* L.

☆Takahashi, M. ¹, S. Matsumoto ², T. Kakizaki ², S. Yuzawa ¹, Y. Takahata ¹, K. Hatakeyama ¹ (1.Fac. Agri., Iwate Univ., 2.NARO, Institute of Vegetable and Floriculture Science)

306 Sodium accumulation and transcriptome in a salt tolerant species *Vigna riukiensis*

○Naito, K. ¹, Y. Noda ¹, J. Furukawa ², H. Sakai ¹, N. Tomooka ¹ (1.National Agrigulture and Food Research Organization, 2.Grad. Sch. Life Environ. Sci, Tsukuba Univ.)

307 Expression analysis of seed storage protein and wheat flour quality in common wheat under heat stress

Tanaka, H. ¹, Y. Gorafi ², M. Fujita ¹, H. Sasaki ¹, I. Tahir ³, ○H. Tsujimoto ² (1.Fac. Agr., Tottori Univ., 2.ALRC, Tottori Univ., 3.ARC, Sudan)

308 Screening of novel genes/mutations in the mechanism of Na⁺ transport using BRILs derived from wild rice *O.rufipogon* and cultivated rice *O.sativa*

☆Horiuchi, T. ¹, R. Ishikawa ³, K. Tanoi ^{4,5}, N. I.Kobayashi ⁴, T. Ishii ³, T. Horie ² (1.Grad.Sch.Bio.,Shinshu Univ, 2.Sch.Tex.Bio.,Shinshu Univ, 3.Grad.Sch.Agr.Sci.,Kobe Univ, 4.Grad.Sch.Agr.Sci.,Univ.Tokyo, 5.PRESTO,JST)

309 Accumulation of protein aggregates in rice embryo is involved in inhibition of seed germination by heat treatment

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

310 Mechanism of acetate-induced drought tolerance in rice

Suzuki, Y., ○Y. Habu (NIAS NARO)

311 Heat response signals in Arabidopsis plants deficient in transcription factor bZIP28 or HSFA2

○Suzuki, N., R. Kataoka, M. Takahashi (Sophia University, Faculty of Science and Technology)

312 Water-saving wheat maintain seed quality under limited water condition

☆Mega, R. ¹, F. Abe ², J. Kikuchi ³, J. Kim ³, K. Tanaka ⁴, H. Kobayashi ⁴, Y. Sakata ⁵, H. Tsujimoto ¹, K. Hanada ⁶, M. Okamoto ^{1,7,8} (1.ALRC, Tottori Univ., 2.Inst. Vegetable and Floriculture Sci., NARO, 3.CSRS, RIKEN, 4.NODAI Genome Res. Center, 5.Appl. Biosci., Tokyo Univ. of Agriculture, 6.Frontier Res. Acad. for Young Researchers, Kyushu Inst. Tech., 7.Center for Biosci. Res. Edu., Utsunomiya Univ., 8.PRESTO, JST)

313 Application of accelerated generation technology by *Apple latent spherical virus* vector to breeding of Japanese gentian

○Yamagishi, N. ¹, K. Kamada ¹, T. Hikage ², N. Yoshikawa ¹ (1.Fac.Agr., Iwate U, 2.Hachimantai City Floricultural R & D Center)

314 Selection of root traits and establishment of appropriate evaluation methods using image analysis in Radish

☆Dan, Y. ¹, S. Dan ², Y. Yoshida ³ (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.Fac. Inf., Osaka Gakuin Univ., 3.Food Resources Edu. and Res. Center, Grad. Sch. Agr. Sci. Kobe Univ.)

315 The variants portfolio of high-yielding MAGIC population enables a grain shape design in rice

☆Ogawa, D., Y. Nonoue, H. Tsunematsu, N. Kanno, M. Yano, T. Yamamoto, J. Yonemaru (NARO)

316 Investigation of new selection method for hardness of rice cake by amylose auto analyzer

☆Doman, K. ¹, Y. Hirayama ¹, T. Sato ^{1,2} (1.Kamikawa Agri.Exp.Stn.,HRO, 2.Donan Agri.Exp.Stn.,HRO)

317 Ion-beam irradiation frequently induces simultaneous alterations of multiple traits in soybean

☆*, N. ¹, S. Mikuriya ¹, M. Kasai 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)

318 Image analysis for QTL analysis: Its application to leaf morphology in a RIL population of sorghum

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

319 Development of field phenotyping method using a multi-spectral camera and evaluation of varietal differences in soybean

☆Sasaki, G. ¹, T. Chen ¹, Y. Toda ¹, S. Yamaoka ¹, Y. Omori ¹, Y. Yamasaki ², H. Takahashi ³, H. Takanashi ¹, M. Tsuda ⁴, 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., Univ. Nagoya., 4.Grad. Sch. Life&Env. Sci., Univ. Tukuba., 5.NICS)

320 Measurement and analysis of growth-related traits of soybean with UAV remote sensing

☆Toda, Y. ¹, A. Kaga ², T. Hattori ¹, S. Yamaoka ¹, M. Okamoto ³, H. Tsujimoto ⁴, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.NICS, 3.Ctr. for Bio. Res. & Edu., Utsunomiya Univ., 4.Arid Land Res. Ctr., Tottori Univ.)

321 Proposing PE (Phenotype substitute for Environment) parameter for GxE study

○Tanabata, T., S. Isobe (Kazusa DNA Research Institute)

322 A design of multi-environment trial for genomic prediction based on the optimal design

☆Tanaka, R. ¹, H. Kajiyama-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)

401 Molecular genetic analysis on Rf1 homologous genes derived from wild rice

☆Ogata, I., k. Toriyama, T. Kazama (Grad.Sch.,Univ.thoku)

402 Identification and characterization of substoichiometric DNA molecule in sugar beet mitochondria

☆Tazoe, S. ¹, T. Murata ², M. Okubo ², T. Kubo ³, K. Kitazaki ³ (1.Hokkaido University Graduate School of Agriculture, 2.Hokkaido University School of Agriculture, 3.Hokkaido University Research Faculty of Agriculture)

403 Comparative mitochondrial genomics of eggplants having normal and male-sterile cytoplasms

☆Tsujimura, M. ¹, K. Kodama ², T. Saito ³, M. Yoshimi ¹, T. Terachi ⁴, H. Yamagishi ⁴ (1.Kyoto Sangyo U. Plant Organelle Genomics R.C., 2.Grad. Sch. Life Sci., Kyoto Sangyo U., 3.Inst. Veg. Flor. Sci., NARO, 4.Fac. Life Sci., Kyoto Sangyo U.)

404 Black radishes possess *orf463* of DCGMS cytoplasm

○Yamagishi, H., T. Terachi (Dep. Life Sciences, Kyoto Sangyo U.)

405 Development of *AP2* mutant lines toward the production of cleistogamous wheat

○Kakeda, K. ¹, H. Haine ¹, M. Ishihara ¹, Y. Oono ², F. Kobayashi ², H. Handa ², M. Yamazaki ², K. Sugimoto ², T. Komatsuda ² (1.Grad. Sch. Bioresour., Mie Univ., 2.Inst. Crop Sci., NARO)

406 The Sorghum (P/tan) Gene encodes a Flavanone 4-Reductase in the 3-deoxyanthocyanidin biosynthesis pathway

○Kawahigashi, H. ¹, Y. Sawada ², H. Mizuno ¹, M. Hirai ², S. Kasuga ³, T. Matsumoto ^{1,4} (1.NICS, 2.RIKEN CSRS, 3.Shinshu Univ, 4.Tokyo University of Agriculture)

407 Identification of a gene controlling the sesamol-in-accumulating trait

Yoroizuka, S. ¹, J. Murata ², E. Ono ³, A. Shiraishi ², A. Nagano ^{4,5}, T. Wakasugi ¹, M. Horikawa ², ○M. Yamamoto ¹ (1.Grad. Sch. Sci. Eng., Univ. Toyama, 2.SUNBOR, 3.Res. Inst., SIC, 4.Fac. Agr., Univ. Ryukoku, 5.JST CREST)

408 Effect of Gibberellin on the expansion rate of leaves, flowering and the expression of flowering genes in *Brassica rapa*

☆Kitamoto, N. ¹, K. Nishikawa ², H. Tsukazaki ³, S. Yui ¹, K. Hatakeyama ¹, Y. Takahata ¹ (1.Iwate University Faculty of Agri., 2.Sakata Seed Co. Ltd, 3.NARO)

409 Transcription of soybean retrotransposon *SORE-1* is regulated by day length

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

410 Isolation of the genes regulated by *Baby boom1* and *Wuschel2* in barley

○Hisano, H., H. Munemori, H. Nishimura, K. Sato (IPSR, Okayama Univ.)

413 Transcriptome and ionome analysis characterize rice mutants with low nitrate uptake ability

☆Teramoto, S. ¹, Y. Ohmori ¹, H. Hasegawa ², T. Fujiwara ¹ (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Grad. Sch. Environ. Sci, Univ. Shiga Pref.)

414 Influence of *Tamyb10* transgene on grain dormancy in wheat

☆Himi, E. ¹, S. Kurihara-Yonemoto ², F. Abe ³, M. Maekawa ¹ (1.Institute of Plant Science and Resources, Okayama University, 2.NARO Hokkaido Agricultural Research Center, 3.NARO Institute of Crop Science)

415 Suppression of ADP-glucose pyrophosphorylase genes affects composition of cell wall polysaccharide in tomato fruit

○Matsukura, C. ¹, H. Suzuki ², M. Miyaji ², Y. Gibon ³, C. Rothan ³, S. Nonaka ¹, N. Fukuda ¹, H. Iwai ¹, H. Ezura ¹ (1.Faculty life & Env. Sci., Univ. Tsukuba, 2.Grad. Sch. Life & Env. Sci., Univ. Tsukuba, 3.INRA Bordeaux Center)

416 Activation of *Dart*, DNA transposon by 5azaC treatment in rice

○Nishimura, H. ¹, E. Himi ¹, K. Tsugane ², M. Maekawa ¹ (1.Inst. Plant Sci. Res., Okayama Univ., 2.Natl. Inst. Basic Biol.)

417 Difference of petal pH with flower color and genetic analysis of P-type H⁺ATPase in *Phalaenopsis* Orchid

○Ito, M., Y. Takahara (Nagaoka University of Technology)

418 Construction and evaluation of the improved Emerald Gateway TALEN system that enables an induced genome editing process

☆Onodera, H. ¹, T. Horie ¹, M. Kihira ¹, H. Aoki ^{1,2}, H. Kusano ^{1,3}, H. Shimada ¹ (1.Grad. Sch. Sci & Technol., Tokyo Univ. of Sci., 2.CSRS., Riken, 3.RISH., Univ. Kyoto)

419 Production of high oleic acid rice by CRISPR/Cas9 system

○Abe, K. ¹, E. Araki ², Y. Suzuki ³, S. Toki ^{1,4}, H. Saika ¹ (1.NIAS, 2.NICS, 3.BRAIN, 4.Kihara. Inst. Biol. Res., Yokohama City Univ.)

420 Evaluation of efficient target sequences for CRISPR/Cas9 based genome editing in common wheat

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

421 CRISPR/Cas9-mediated targeted mutagenesis using endogenous RNases-dependent RNA processing system in plants

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

422 Construction of genome editing platform using the CRISPR/Cas9 system in soybean

☆Kanazashi, Y. ¹, A. Hirose ¹, I. Takahashi ¹, M. Mikami ², M. Endo ³, S. Hirose ³, S. Toki ³, A. Kaga ⁴, K. Naito ⁵, M. Ishimoto ⁴, J. Abe ¹, T. Yamada ¹ (1.Grad. Sch. Agric., Hokkaido Univ., 2.Grad. Sch. Nanobiol., Yokohama City Univ., 3.Inst. Agrobio. Sci., NARO, 4.Inst. Crop Sci., NARO, 5.Inst. Genetic Resource., NARO)

501 Differences of nitrogen absorption and yield in soybean strains

○kobayashi, s., Y. Watanabe (Tokachi Agr. Exp. Sta., HRO)

502 Effect of nutrient solution concentration on the development of secondary xylem in tomato hypocotyls

☆Iwata, Y. ¹, A. Nakagawa ², K. Yano 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)

503 Fine mapping of the *qPBN3* locus affecting panicle development in rice

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

504 Factors regulating coloration of green asparagus

☆Tsugama, D. ¹, A. Kanno ², H. Shimura ¹, K. Fujino ¹ (1.Res. Fac. Agr., Hokkaido Univ., 2.Grad Sch. Life Sci., Tohoku Univ.)

505 Development and evaluation of a rice near-isogenic line for high oil content by thickening of aleurone layer

☆Sakata, M., H. Inoue, Y. Sano, Y. Yamagata, O. Khin, T. Mochizuki, K. Takahashi, M. Sato, A. Yoshimura, T. Kumamaru (Fac. Agr., Grad. Sch., Kyushu Univ.)

506 Mapping of QTLs for protein content of brown rice and gene expression analysis using near isogenic lines carrying relevant QTLs

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

507 Study on non-additive traits in synthetic hexaploid wheat

☆Watanabe, R., Y. Ogihara, K. Kawaura (KIBR, Yokohama City U.)

508 The differences of phosphorus translocation and storage among the varieties of rice

☆Shiozaki, M., T. Fukuda, K. Sasaki, N. Aoki, K. Yoshida (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

509 Measuring Tolerance to Phosphorus Deficiency of Rice Varieties during the Early Stage of Growth

☆Fukuda, T., M. Shiozaki, K. Sasaki, N. Aoki, K. Yoshida (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

510 Development of the 'Tsuyahime' mutant libraries and isolation of starch biosynthetic mutants by TILLING

☆Kawakami, T. ¹, H. Goto ², Y. Abe ³, T. Homma ³, M. Chuba ², T. Hoshino ¹ (1.Grad. Sch. Agr., Yamagata Univ., 2.Yamagata Int. Agr. Res. Cent., 3.Rice Breed. Crop Sci. Exp. Stn., Yamagata Int. Agr. Res. Cent.)

511 RAD-Seq analysis of pecan (*Carya illinoensis*)

☆Ishimori, M. ¹, H. Takanashi ¹, K. Fukami ¹, H. Kajiya-Kanegae ¹, K. Cervantes ², A. J. Nagano ³, L. Grauke ⁴, N. Tsutsumi ¹, J. Randall ², H. Iwata ¹ (1.Grad. Sch. Agri. Life Sci., Univ. Tokyo, 2.Entomo. Plant Patho. Weed Sci., New Mexico State Univ., 3.Fac. Agri., Ryukoku Univ., 4.USDA-ARS Pecan Breed. Genet.)

512 Exploration of Cucurbitaceae crops in Northern and Central Cambodia

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

513 Genetic intra-specific polymorphism in *Racomitrium japonicum*

○Sekita, R. (Grad. Dip. Bio., Univ. Nagaoka)

514 Development of an educational program 'Garden PCR' for experience of plant genetic diversity at the DNA level

Asano, Y., S. Miyazaki, R. Kikuchi, ○N. Asakura (Fac. Engin., Kanagawa Univ.)

515 Variation of morphological and ecological traits among populations of common and coastal varieties of green foxtail (*Setaria viridis*)

○Yamamoto, S., T. Ohsako (Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.)

516 Genetic variation and mating system of edible coastal plant *Glehnia littoralis* in Japan

Tamura, Y., ○T. Ohsako (Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.)

517 Genetic studies on Bambuseae species in Japan. XLI(41). Results of the reciprocal crosses between ougon and ginmei types of *Bambusa multiplex*

○Muramatsu, M. (*)

518 Breeding of a new rice cultivar "Ichihomare"

○Kobayashi, A., K. Tomita, Y. Machida, F. Nakaoka, Y. Morozumi, T. Hayashi, M. Tanoi, K. Watanabe, K. Sakai, T. Shimizu (Fukui Agr. Exp. Stn.)

519 Development of a Late Maturing Rice Line "Tohoku 229" Substituted for Koshihikari Alleles ,at the Heading Date Gene Loci *Hd1*, *Hd16*and *Hd18*

☆Ishimori, Y. ¹, k. Saeki ², T. Endo ¹, H. Sato ¹, Y. Nakagomi ¹, R. Mizobuchi ³, F. Taguchi-Shiobara ³, S. Fukuoka ³, T. Ando ³, U. Yamanouchi ³ (1.Miyagi Prefectural Furukawa Agricultural Experiment Station, 2.Miyagi Prefectural Office, 3.Institute of Crop Science,NARO)

520 Verification of natural hybridization where *O. rufipogon* and *O. meridionalis* inhabited together in Australia

☆Sugawara, K. ¹, K. Ichitani ², R. Ishikawa ¹ (1.Fac. Agri. And Life Sci., Hirosaki Univ., 2.Fac. Agri., Kagoshima Univ.)

521 Presumed introgression segments of AS996 from Vietnamese wild rice into IR64, by using NGS data

☆Dinh, T. ^{1,2}, C. Bui ², R. Ishikawa ¹ (1.Fac. of Agri. and Life Sci., Hirosaki Univ., 2.Institute of Agriculture, Southern Viet Nam, Viet Nam)

522 Evaluation of candidates genetic resources for resistance to white cyst nematode and agricultural characteristics

○Asano, K. ¹, T. Narabu ¹, S. Aiba ¹, A. Moriya ², M. Tsuyama ³, T. Igarashi ³, E. Shimosaka ¹, K. Akai ¹, S. Tamiya ¹ (1.NARO Hokkaido Agric. Res. Cent., 2.HOKUREN Agric Res. Inst., 3.Calbee potato Inc.)

601 Why *Brassica S* genes do not function in *Arabidopsis thaliana*?

☆Yamamoto, M., T. Nishio (Tohoku Univ. Grad. Sch. of Agri. Sci.)

602 Development of a dot-blot *S* haplotype identification method based on *S* haplotype collection from Japanese F1 cultivars in radish

☆Haseyama, Y. ¹, H. Kitashiba ¹, S. Okamoto ², k. Sakamoto ², T. Nishio ¹ (1.Grad. Sch. Agr., Univ. Tohoku, 2.Takii Seed Co., Ltd.)

603 Characterization of a *BoFLC2* introgressed *Brassica rapa*

☆Shea, D. ¹, Y. Tomaru ^{1,6}, E. Itabashi ², T. Miyazaki ³, T. Kakizaki ², M. Shimizu ⁴, R. Fujimoto ⁵, E. Fukai ¹, K. Okazaki ¹ (1.Fac. Agric. Niigata U., 2.NARO,NIVFS, 3.Nippon Norin Seed Co., 4.Iwate Biotech. Res. Center, 5.Fac. Agric. Kobe U., 6.Taki & Co. LTD)

604 The relationship between heterostyly and floral organ specific exopolysaccharidase in buckwheat

☆Takeshima, R. ¹, T. Nishio ², S. Komatsu ³, N. Kurauchi ⁴, K. Matsui ¹ (1.Inst. Crop Sci., NARO, 2.Grad. Sch. Agr. Sci., Univ. Tohoku, 3.Grad. Sch. Life and Environ. Sci., Univ. Tsukuba, 4.Col. Bioresour. Sci., Univ. Nihon)

605 Determination of pollen and stigma factors for intraspecies unilateral incompatibility in *Brassica rapa*

☆Takada, Y. ¹, K. Murase ^{2,3}, H. Shimosato-Asano ², T. Sato ¹, H. Nakanishi ⁴, K. Suwabe ⁵, Y. Lim ⁶, K. Shimizu ^{7,8}, S. Takayama ^{2,3}, G. Suzuki ⁴, M. Watanabe ¹ (1.Grad. Sch.Life Sci., Tohoku Univ., 2.NAIST Biosci., 3.Grad. Sch. Agric. Life Sci., U. Tokyo, 4.Div. Nat. Sci, Osaka kyoiku U., 5.Grad. Sch. Bioresour., Mie U., 6.Chungnam National U., 7.University of Zurich, 8.Kihara Inst. Bio. Res., Yokohama City U.)

606 Development tetraploid hybrid between *Oryza glaberrima* and *O. sativa japonica*

☆Masuda, I. ¹, Y. Kanaoka ¹, D. Kuniyoshi ¹, Y. Koide ¹, I. Takamura ^{1,2}, N. Ohmido ³, Y. Hoshino ², Y. Kishima ¹ (1.Hokkaido Univ. Grad. Sch. of Agriculture, Plant Breeding Lab.,

607 Genetic analysis of male sterility obtained from a rice cultivar LEBED backcrossed with Taichung 65

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

608 QTL mapping for anther length with the F₂ population derived from the cross between a Japanese rice cultivar, "Koshihikari" and *Oryza rufipogon* Griff

☆Mujadidi, M. ¹, K. Shirasawa ², S. Ogawa ¹, N. Watanabe ¹, T. Kuboyama ¹ (1.Col. Agr., Ibaraki U., 2.Kazusa DNA Res. Inst.)

609 Histological analysis of the ovary abscission in interspecific-interploidy cross *Nicotiana suaveolens* PI 555565 × *N. tabacum*

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

610 Comparative analysis of two types of hybrid weakness in rice

☆Shiragaki, K. ¹, T. Sahara ², K. Ichitani ³, T. Kuboyama ⁴, A. Matsumura ¹, T. Morikawa ¹, T. Tezuka ¹ (1.Grad. Sch. Life Envi. Sci., Osaka Pref. Univ., 2.Sch. Life Envi. Sci., Osaka Pref. Univ., 3.Fac. Agr., Kagoshima Univ., 4.Col. Agr., Ibaraki Univ.)

611 Influences of high temperature condition on phenotype and gene expression pattern of hybrid weakness caused by *HWA1* and *HWA2* in rice

☆Obata, M. ¹, K. Shiragaki ¹, K. Ichitani ², T. Kuboyama ³, A. Matsumura ¹, T. Morikawa ¹, S. Yokoi ¹, T. Tezuka ¹ (1.Grad. Sch. Life Envi. Sci., Osaka Pref. Univ., 2.Fac. Agr., Kagoshima Univ., 3.Col. Agr., Ibaraki Univ.)

612 Phylogenetic analysis of six accessions of *Nicotiana occidentalis* which show different types of hybrid lethality in crosses with *N. tabacum*

☆Kawaguchi, K., Y. Ohya, T. Morikawa, S. Yokoi, T. Tezuka (Grad. Sch. Life Envi. Sci., Osaka Pref. U.)

Poster presentations

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

○Kuroda, M., T. Yamaguchi, H. Yamakawa (NARO Central Region Agric. Res. Cent)

P002 Development of phenotypic marker accumulated anthocyanin at leaf sheath to distinguish between transgenic and non-transgenic rice

☆Oshima, M. ¹, Y. Taniguchi ¹, J. Tanaka ², H. Ichikawa ¹, M. Akasaka ^{2,3}, Y. Tabei ¹
(1.NIAS, 2.NICS, 3.TARC)

P003 Estimation of soybean phenotypes with deep learning

○Yamada, T., Y. Nanjo, K. Takahashi, M. Takahashi, Y. Taki, Y. Tominaga, M. Hajika (Inst. Crop Sci., NARO)

P004 Development of a simple evaluation method for forage breeding with Unmanned Aerial Vehicle (UAV)

○Akiyama, Y. ¹, A. Kubota ², Y. Sanada ¹, M. Fujimori ² (1.NARO Hokkaido Agricultural Research Center, 2.NARO Tohoku Agricultural Research Center)

P005 Quantitative analysis of strawberry fruits morphology by image analysis and genome wide association analysis

○Nagamatsu, S. ¹, M. Tsubone ¹, T. Wada ¹, A. Hayashi ², T. Tanabata ², S. Isobe ², M. Mori ¹, C. Hirata ¹, K. Takata ¹, K. Shimomura ¹ (1.Fukuoka Agric. Forest. Res. Cent., 2.Kazusa DNA Res. Inst.)

P006 New line breeding of "Hyuga-kabocha" squash of Miyazaki original vegetable variety selected from offspring of interspecific hybrids

○Chen, L. ^{1,2}, Y. Iwamoto ¹, K. Gotou ¹ (1.Grad. Sch. Minami Kyushu U., 2.Fac. Envir. Hort. Sci., Minami Kyushu U.)

P007 Breeding of a new two-rowed waxy barley cultivar "Kusumochi Nijo"

☆Sugita, T. ¹, M. Taira ¹, K. Nakamura ¹, H. Matsunaka ¹, N. Kawada ², T. Tonooka ³, H. Araki ⁹, K. Hatta ⁴, M. Fujita ⁵, K. Kubo ⁶, S. Oda ⁵, T. Hatano ¹, M. Seki ⁷, Z. Nishio ⁸
(1.NARO, Kyushu Okinawa Agricultural Research Center, 2.Kyoto Gakuen University, 3.NARO, Headquarter, 4.NARO, Hokkaido Agricultural Research Center, 5.NARO, Institute

of Crop Science, 6.NARO, Tohoku Agricultural Research Center, 7.NARO, Central Region Agricultural Research Center, 8.Tokyo University of Agriculture, 9.NARO, fellow)

P008 Development of a new variety 'Natsukichi', suitable for spring sowing in Tohoku region

○Kawasaki, M. ¹, N. Ogata ², Y. Honda¹ ³, M. Kato ² (1.Tohoku Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO, 3.NARO)

P009 Breeding of a new wheat cultivar resistant to WYMV 'Tamaizumi R'

○Fujita, M., C. Otobe, T. Takayama, H. Kojima, M. Chono, Y. Fujita (Institute of Crop Science, NARO)

P010 Development of new soybean varieties with pod shattering resistance - Sachiutaka A1 gou, Fukuyutaka A1 gou, Enreinosora and Kanto 122 -

○Takahashi, K. ¹, T. Yamada ¹, Y. Nanjo ¹, M. Takahashi ¹, S. Yumoto ¹, A. Hishinuma ¹, K. Hirata ¹, N. Yamada ², N. Oki ¹, H. Funatsuki ¹, M. Hajika ¹ (1.NARO, 2.Nagano Vegetable and Ornamental Crops Experiment Station)

P011 Breeding of a new sweetpotato cultivar "Suzukogane" for Shochu with high adaptability to direct planting

○Sakai, T. ¹, A. Kobayashi ¹, K. Katayama ², T. Fujita ¹, M. Yoshinaga ³, Y. Takahata ¹, Y. Kai ¹, T. Fujita ⁴, K. Iwai ⁴ (1.NARO/KARC, 2.NARO/NICS, 3.NARO/HARC, 4.KIRISHIMA SHUZO Co., Ltd.)

P012 Description of wild *Camellia* genetic resources collected from south of Vietnam

○Nguyen, T. ¹, V. Luong ², K. Fukuyama ³, H. Katayama ⁴, C. UEMATSU ¹ (1.Grad. Sch. Sci., Osaka City Univ., 2.Dept. Biol., Dalat Univ., 3.Fac. Sci., Osaka City Univ., 4.Grad. Sch. Agr., Kobe Univ.)

P013 Genetic characterization of wild Triticeae genetic resources collected in Tibetan Plateau, Qinghai Province, China

○Sasanuma, T. ¹, M. Saito ¹, H. Tanaka ², K. Sato ³, M. Zhu ⁴, C. Long ⁴ (1.Fac. Agr., Yamagata Univ., 2.Fac. Agr., Tottori Univ., 3.IPSR, Okayama Univ., 4.Chin. Acad. Sci.)

P014 Exploration of Genetic Resources in Western Cambodia

○Okuizumi, H. ¹, E. Nonaka ¹, S. Layheng ², O. Chhoun ², S. Sophany ², O. Makara ²
(1.Genetic Resources Center, NARO, 2.Cambodian Agricultural Research and Development Institute)

P015 Newly released introgression lines of AA genome species in genetic background of *Oryza sativa* L. Taichung 65

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

P016 Variations of harvesting time and fruit traits in genetic resources of Japanese apricot

○Numaguchi, K. ^{1,2}, Y. Kitamura ¹, Y. Naka ¹, T. Oe ¹, Y. Tsuchida ¹, R. Ishikawa ², T. Ishii ² (1.Japanese Apricot Lab., Fruit Tree Exp. Sta., Wakayama Pref., 2.Grad. Sch. Agr. Sci., Kobe Univ.)

P017 Powdery mildew resistance by *NtMLO1/2* gene mutation in Japanese domestic tobacco cultivars

○Sato, S., T. Komatsu, H. Udagawa, T. Tajima, M. Arai (Leaf Tobacco Research Center, Japan Tobacco Inc.)

P018 Molecular phylogeny and variety-specific markers in *Brassica juncea* based on microsatellite region

Tanaka, K. ¹, ○S. Yoshida ², M. Onodera ³, A. Nishikawa ³, T. Nohara ³, M. Hatanaka ³, R. Ohtake ¹, K. Irie ², K. Wakui ³ (1.NODAI Genome Research Center, Tokyo Univ. of Agri., 2.Department of International Agriculture Development, Tokyo Univ. of Agri., 3.Department of Bioproduction Technology, Jun. Coll. of Tokyo Univ. of Agri.)

P019 Morphological and ecological variations in *Gentiana scabra* local populations: comparison with *G. triflora* and *G. triflora* f. *montana*

○Tsutsumi, K. ¹, T. Hikage ², S. Watanabe ³, Y. Saitoh ¹ (1.Iwate University, Faculty of Agriculture, 2.Hachimantai City Floricultural Research and Development Center, 3.Iwate Prefectural Museum)

P020 Comparison of mitochondrial genome of *Brassica juncea* with *Brassica rapa*, and the intraspecies differentiations

☆Hatono, S. ¹, M. Tsujimura ², H. Yamagishi 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.)

P021 Individual selection effects on stabilization of essential oil component contents in *Atractylodes lancea* De Candolle

☆Tsusaka, T. ^{1,2}, M. Sakurai ¹, B. Maikino ¹, T. Matsuba ¹, K. Kondo ¹, K. Hashimoto ¹, H. Ezura ³ (1.Botanical Raw Materials Research Laboratories, Tsumura & Co., 2.Grad. Sch. Life & Envi. Sci., Univ. Tsukuba, 3.Facul. Life & Envi. Sci., Univ. Tsukuba)

P022 Searching for high content lines of total alkaloids in a medicinal plant, *Ephedra sinica* Stapf

☆Hiyama, H. ^{1,2}, T. Matsuba ¹, K. Kondo ¹, k. Hashimoto ¹, Y. Yoshioka ³, R. Ohsawa ³ (1.Botanical Raw Materials Research Laboratories, TSUMURA & CO., 2.Grad. Sch. Life & Envi. Sci., Univ. Tsukuba, 3.Facul. Life & Envi. Sci., Univ. Tsukuba)

P023 Conservation of the genes for awn elongation in rice AA genome species and investigation of awn phenotype

☆Bessho-Uehara, K. ¹, K. Masuda ¹, Y. Yamagata ², A. Yoshimura ², M. Ashikari ¹ (1.Nagoya University, BioScience&BioTechnology center, 2.Kyushu University, Plant Breeding Lab)

P024 The Nagoya Protocol to the Convention on Biological Resources has become into force in Japan

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

P025 Characterization of "Mizukagami" near isogenic lines with *Hd1*, *Pb1* and *stvb-i* bred by marker-assisted selection

○Nishimura, T. ¹, T. Yoshida ¹, S. Mori ², S. Shiigi ¹, K. Hino ¹, Y. Yamada ³, A. Syomura ⁴, S. Fukuoka ⁴, U. Yamanouchi ⁴, F. Taguchi ⁴, R. Mizobuchi ⁴ (1.Shiga Pref. Agric. Tech. Prom. Cent., 2.Shiga Pref. Gov., 3.Shiga Pref. Higashiomi Agric. and Rural Dev. Prom. Office, 4.Inst.Crop. Sci., NARO)

P026 Molecular identification of a mutant allele of *FAE1* gene in *Brassica rapa*

○Fukai, E. ¹, M. Karim ², N. Tonu ³, K. Falk ⁴, K. Okazaki ¹ (1.Graduate School of Science and Technology, Niigata University, 2.Saskatoon Research and Development Centre, Agriculture and Agri-Food Canada, 3.Department of Plant Pathology, Sher-e-Bangla Agricultural University, 4.Crop Breeding and Diversification, Agriculture and Agri-Food Canada)

P027 Genetic analyses of non-pungency in pepper suggesting presence of a novel locus.
II

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

P028 Screening of NIAS world Rice Core collection for seeds with long longevity as potential breeding materials

☆Saighani, K. ¹, D. Kondo ¹, K. Murata ², M. Kashiwagi ¹, T. Yamada ¹, M. Kanekatsu ¹ (1.Tokyo Univ. of Agr. and Tech., 2.Toyama Pref. Agr. Forest. Fish. Res. Cent.)

P029 Development of DNA marker for detection of sporulation-deficient mutation trait in Tamogitake (*Pleurotus cornucopiae* var. *citrinopileatus*)

○Yoneyama, S. ¹, N. Shirai ², T. Azuma ¹, M. Sato ¹, T. Matsumoto ² (1.Forest Products Res. Inst., Hokkaido Res. Org., 2.Grad. Sch. Sci., Univ. Tottori)

P030 Efficient breeding of double-flowered gentian plants using molecular DNA marker

○Nishihara, M. ¹, A. Higuchi ¹, A. Watanabe ¹, M. Iwai ¹, Y. Kanno ¹, K. Tasaki ¹, R. Takahashi ², Y. Takamura ², T. Hikage ², Z. Naito ³, S. Ozawa ³, H. Abe ³, M. Odajima ³, H. Kawamura ³ (1.Iwate Biotech. Res. Cent., 2.Hachimantai City Floric. Res. Dev. Cent., 3.Iwate Agr. Res. Cent.)

P031 Identification of loci associated with genic male sterility trait in *Brassica rapa* ssp. *rapa* cv. 77B

Komatsu, K. ¹, ○M. Ozeki ², A. Yamamoto ¹, K. Tanaka ³, R. Ohtake ³, Y. Mitsui ², K. Wakui ¹ (1.Department of Bioproduction Technology, Junior College of Tokyo University of Agriculture, 2.Department of Human and Animal-Plant Relationships, 3.The NODAI Genome Research Center)

P032 Identification and validation of a novel major QTL for 100-seeds weight in soybean

☆Liu, D. ^{1,2}, 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)

P033 Construction of highly flexible soybean breeding panel integrating whole genome sequence and QTL information using AmpliSeq technology

☆Ogiso-Tanaka, E. ¹, F. Tagushi-Shiobara ¹, K. Hirata ², A. Kaga ¹, M. Hajika ¹, M. Ishimoto ¹ (1.National Agriculture and Food Research Organization, Institute of Crop Science, NARO, 2.National Agriculture and Food Research Organization, Tohoku Agricultural Research Center, NARO)

P034 Development of DNA markers rested on genomic sequences of male sterile candidate gene in *Cryptomeria japonica*

☆Tamura, M. ¹, N. Goda ², N. Yamasaki ³, A. Watanabe ¹ (1.Fac. Agr., Kyushu Univ., 2.Grad. Sch. Bioresource and Bioenvironmental Sci., Kyushu Univ., 3.Sch. Agr., Kyushu Univ.)

P035 Application of the BrAD-seq method for detection of genome-wide polymorphisms among multiple accessions of *Aegilops tauschii*

☆Nishijima, R., K. Yoshida, S. Takumi (Grad. Sch. Agr. Sci., Kobe Univ.)

P036 QTL analysis for yield traits in F₂ of a cross between *Oryza Longistaminata* introgression line pLIA-4and Basmati under low input conditions

○Tun, S., G. Emily, M. Maekawa (Inst. Plant Sci. Res., Okayama Univ.)

P037 Re-construction of a linkage map of a QTL region for the fruiting-season type of *Lentinula edodes* using HRM markers developed from RAD-seq tags

Terashima, K. ¹, ○A. Sasaki ¹, K. Ishikawa ², A. Nagano ³, K. Hasebe ¹ (1.The Tottori Mycological Institute, 2.Aichi Prefectural Forestry Research Institute, 3.Faculty of Agriculture, Ryukoku University)

P038 QTL analysis for bacterial wilt resistance in potato

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

P039 Detection of chromosome segments for rice grain quality and yield-related traits in two closely related *Oryza sativa* L. subsp. *japonica* cultivars

Shimanuki, W. ¹, S. Yoshikawa ¹, N. Kinoshita ¹, N. Takahashi ², T. Kawashima ², S. Takano ¹, T. Nishimura ^{3,4}, Y. Hirayama ³, I. Takamure ², T. Sato ⁵, ○K. Kato ¹ (1.Obihiro Univ. Agr. & Vet. Med., 2.Res. Fac. Agr., Hokkaido Univ., 3.Kamikawa Agr. Exp. Sta., HRO,

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P040 A QTL for high seed coat cracking rate of soybean cultivar 'Fukuyutaka'

○Komatsu, K., M. Saruta, Y. Takada, K. Yamashita (NARO,Western Agricultural Research Center)

P041 Examination of phenotyping for precise mapping of a white-core QTL, *qWCY6* derived from Yamadanishiki, a brewing rice cultivar

☆Okada, S., W. Yokoyama, M. Suehiro, M. Yamasaki (Food Resources Education and Research Ctr., Grad. Agric. Sci., Kobe U.)

P042 Canceled

P043 Development of chromosome segment substitution lines towards improvement for agronomic traits of malting barley variety via Japanese landrace 'Hayakiso 2'

○Saisho, D. ¹, K. Takahagi ^{2,3}, K. Mochida ^{1,2}, H. Handa ⁴, K. Sato ¹ (1.IPSR, Okayama U., 2.CSRS, RIKEN, 3.Grad. Sch. Nanobio., Yokohama City U., 4.Institute of Crop Science, NARO(NICS))

P044 Can GWAS using whole-genome find causal SNPs regardless of population structure? : Comparison with conventional GWAS

☆Hamazaki, K. ¹, H. Kajiya-Kanegae ², M. Yamasaki ³, K. Ebana ⁴, S. Yabe ⁶, H. Nakagawa ⁵, H. Iwata ² (1.Fac.Agr., U.Tokyo, 2.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 3.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe Univ., 4.Genetic Resources Center, NARO, 5.Institute for Agro-Environmental Sciences, NARO, 6.Institute of Crop Science, NARO)

P045 Practice and validation of genomic selection using RILs derived from a cross of two F1 hybrids of tomato as breeding population

○Ohyama, A. ¹, E. Yamamoto ², H. Matsunaga ¹, K. Miyatake ¹, H. Yamaguchi ¹, T. Nunome ¹, H. Fukuoka ³, T. Hayashi ⁴ (1.Institute of Vegetable and Floriculture Science, NARO, 2.Kazusa DNA Research Institute, 3.NARO Institute of Vegetable and Tea Science (Present address: Takii & Co., Ltd), 4.Institute of Crop Science, NARO)

P046 MutMapPlus identified novel mutant alleles of a rice starch branching enzyme IIb gene for fine-tuning of cooked rice texture

☆Yamakawa, H. ¹, H. Takagi ², M. Nakata ¹, T. Miyashita ¹, M. Kuroda ¹, T. Yamaguchi ¹, T. Umemoto ³ (1.Central Region Agricultural Research Center, NARO, 2.Ishikawa Prefectural University, 3.Institute of Crop Science, NARO)

P047 Elucidation of gene dosage compensation in papaya X chromosome

☆Miyata, I. ¹, H. Ueno ², K. Tarora ³, N. Urasaki ³, H. Matsumura ⁴ (1.Grad. Sch. Sci. Tech., Shinshu Univ., 2.Inst. Veg. Flori. Sci., NARO, 3.Okinawa Pref. Agric. Res. Ctr., 4.Gene Res. Ctr., Shinshu Univ.)

P048 Constitutive expression of HKTs from *Sporobolus virginicus* enhances uptake and accumulation of potassium in transgenic *Arabidopsis*

○Tada, Y. ¹, C. Endo ¹, M. Katsuhara ², T. Horie ³, T. Kurusu ¹ (1.School of Biosci and Biotechnol, Tokyo Univ of Technol, 2.Plant Res Inst, Okayama Univ, 3.Fuculty of Textiles, Shinsyu Univ)

P049 Introduction of *Tamyb10-D1* through genetic transformation to a white-grained wheat variety makes grain coat color red and increases seed dormancy

○Kurihara-Yonemoto, S. ¹, F. Abe ² (1.NARO Hokkaido Agricultural Research Center, 2.NARO Institute of Crop Science)

P050 Canceled

P051 Genome editing of somatic embryo mediated by particle bombardment in soybean

☆Adachi, K. ¹, Y. Kanazashi ², A. Hirose ², S. Sugano ², M. Mikami ³, M. Endo ⁴, S. Hirose ⁴, S. Toki ⁴, M. Ishimoto ⁵, J. Abe ², T. Yamada ² (1.Dep. Agric., Hokkaido Univ., 2.Grad. Sch. Agric., Hokkaido Univ., 3.Grad. Sch. Nanobiol., Yokohama City Univ., 4.Inst. Agrobio. Sci., NARO, 5.Inst. Crop Sci., NARO)

P052 Effect for grain and branch numbers of *OsCKX2*(*Gn1a*) mutated indica rice using CRISPR/Cas9

○Ohtake, M. ¹, M. Nagata ¹, M. Endo ¹, S. Toki ¹, H. Sakakibara ², A. Komatsu ¹ (1.NARO Institute of Agrobiological Sciences(NIAS), 2.CSRS,RIKEN)

P053 Pollen irradiation mutagenesis in tomato

○Nunome, T. ¹, K. Shirasawa ², K. Miyatake ¹, H. Yamaguchi ¹ (1.NIVFS, 2.Kazusa DNA Res. Ins.)

P054 Relationships between *AP2* gene mutations and cleistogamous flowering in hexaploid wheat

☆Haine, H. ¹, Y. Oono ², K. Sugimoto ², T. Komatsuda ², K. Kakeda ¹ (1.Grad. Sch. Bioresour., Mie Univ., 2.Inst. Crop Sci., NARO)

P055 Starting the field trial of the potato produced by epigenome editing using grafting

☆Kasai, A. ¹, T. Harada ¹, M. Yamazaki ², Y. Tabei ², S. Akada ¹ (1.Fac. Agric. Life Sci., Hirosaki Univ., 2.NARO)

P056 The molecular genetic analysis of plasmid-like circular DNA in rice mitochondria

☆Abe, M., T. Kazama, K. Toriyama (Grad. Sch. Agri. Sci., Tohoku Univ.)

P057 Study on the replication origin of the transformation vector that is autonomously replicable in chloroplast

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

P058 The development of a method for producing a bipartite chloroplast genome in plants

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

P059 Distribution of male sterile cytoplasm in wild relatives of eggplant

☆Kodama, K. ¹, M. Yoshimi ², M. Tsujimura 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.Inst. Veg. Flor. Sci., NARO, 4.Fac. Life Sci., Kyoto Sangyo U.)

P060 Construction of full-length transcripts using long-read sequencing in sweetpotato

Ono, N. ¹, K. Ushijima ¹, H. Tabuchi ², M. Tahara ¹, ○Y. Monden ¹ (1.Grad. Sch. Env. & Life Sci., Okayama Univ., 2.KONARC)

P061 Canceled

P062 Construction of the management system for genotype-phenotype data

☆Kajiya-Kanegae, H. ¹, Y. Toda ¹, T. Hattori ¹, S. Yamaoka ¹, Y. Ohmori ¹, M. Okamoto ², H. Tsujimoto ³, A. Kaga ⁴, T. Fujiwara ¹, H. Iwata ¹ (1.Grad. Sch. Agr. Life Sci., U. Tokyo, 2.Ctr. for Bio. Res. & Edu., Utsunomiya Univ., 3.Arid Land Res. Ctr., Tottori Univ., 4.NICS)

P063 A web database for comprehensive transcriptome in Japanese pear (*Pyrus pyrifolia*)

☆Nakamura, Y. ¹, M. Kobayashi ¹, C. Nishitani ², T. Yamamoto ², K. Yano ¹ (1.Dept. Life Sci., Sch. Agr., Meiji Univ., 2.Inst. Fruit Tree and Tea Sci., NARO (NIFTS))

P064 New functions and data contents in the web databases TOMATOMICS, PODC, CatchUP, and PlantExpress

☆Kudo, T. ¹, M. Kobayashi ¹, Y. Nakamura ¹, M. Saito ¹, M. Kanno ¹, K. Aoki ², K. Yano ¹ (1.Sch. Agri., Meiji Univ., 2.Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.)

P065 Creation of image library of rice grain based on appearance quality

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

P066 Seed ionome of soybean germplasm: varietal differences, influence of canopy position and relationship with other agronomic traits

☆Yamaoka, S. ¹, A. Kaga ², T. Kamiya ¹, T. Fujiwara ¹, H. Iwata ¹ (1.Graduate School of Agricultural and Life Sciences, 2.NICS)

P067 Field transcriptome analysis of powdery mildew-infected leaves of wild wheat-related species *Aegilops umbellulata*

○Yoshida, K., N. Mizoo, S. Takumi (Grad. Sch. Agr. Sci., Kobe Univ.)

P068 Overexpression of *BSR2* confers resistance to *Botrytis cinerea* and enlarged flower in *Torenia*

Maeda, S. ^{1,2}, K. Sasaki ³, N. Ohtsubo ⁴, ○M. Mori ¹ (1.NIAS, 2.Grad. Sch. Life & Env. Sci., U. Tsukuba, 3.NIVFS, 4.Kyoto Pref. Univ.)

P069 Overexpression of *BSR1* confers resistance to smut disease in sugarcane

☆Maeda, S. ^{1,2}, W. Takahashi ³, M. Mori ¹ (1.NIAS, 2.Grad. Sch. Life & Env. Sci., U. Tsukuba, 3.NILGS)

P070 The inheritance of resistance to the southern root-knot nematode (*M. incognita*) and its application to *Mi*-resistant breeding in black oat (*A. strigosa*)

○Uwatoko, N., K. Uesugi, G. Murata, A. Arakawa, T. Takai, M. Katsura (NARO Kyushu Okinawa Agricultural Research Center)

P071 Selection of drought tolerance soybean lines in paddy field

○Takada, Y., K. Yamashita, K. Komatsu, M. Saruta (WARC, NARO)

P072 Germination and seedling emergence under low temperature conditions in ABA mildly insensitive mutant rice

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

P073 Screening method for utilization of insoluble inorganic phosphate by rice using agar medium

☆Kudo, M. ¹, H. Kokaji ¹, H. Hirabayashi ², A. Shimizu ¹ (1.Grad. Sch. Environ. Sci., Univ. Shiga Pref, 2.Inst. of Crop Sci., NARO)

P074 Exploring chromosome region in indica rice cultivar "Habataki" for heat-stress tolerance in seeds during hot water disinfection

☆Kashiwagi, M. ¹, K. Murata ², T. Yamada ¹, M. Kanekatsu ¹ (1.Uni. Grad. Sch. of Agri. Sci., Tokyo Univ. of Agr. & Tech., 2.Toyama Pref. Agr. Forest. Fish. Res. Cent.)

P075 Comparison of formations of barrier to radial oxygen loss in barnyard grass and rice

☆Ejiri, M., K. Shiono (Department of Bioscience and Biotechnology, Fukui Prefectural University)

P076 Analysis on the Arabidopsis T-22 mutant exhibiting root avoidance of Cd

○Watanabe, A., H. Sasaki, K. Ueda, K. Sakurai, H. Takahashi, H. Akagi (Fac. Bioresource Sci., Akita Prefectural Univ.)

P077 Elucidating relative drought stress responsiveness in pearl millet [*Pennisetum glaucum* (L.) R.Br) inbred lines through RNA sequencing

☆Dudhate, A. ^{1,2}, H. Shinde ^{1,2}, S. Liu ³, 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.Northeast Forestry, Univ. China)

P078 Elucidation of the mechanism of aerenchyma formation regulated by lateral root of rice

☆Shimizu, K. ¹, F. Gong ^{1,2}, H. Takahashi ¹, S. Shimizu(Satou) ³, Y. Satou ³, M. Nakazono ¹ (1.Grad. Sch. Bioagr. Sci., Nagoya Univ., 2.Henan Agricultural University, 3.National Institute of Genetics)

P079 Evaluation of the trait for formation of the radial oxygen loss barrier in lateral roots of *Zea nicaraguensis*

☆Yasue, H. ¹, K. Watanabe ¹, M. Nakazono ¹, H. Takahashi ¹, T. Colmer ², O. Pedersen ³, A. Fløyttrup ³, K. Omori ⁴, Y. Mano ⁴ (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Fac. Sci., Univ. Western Australia, 3.Dep. Biol., Univ. Copenhagen, 4.Inst. Livest. Grassl. Sci., NARO)

P080 Identification of a major locus involved in the formation of the radial oxygen loss barrier in roots of *Zea nicaraguensis*

☆Ide, K. ¹, K. Watanabe ¹, H. Takahashi ¹, H. Takahashi ², F. Omori 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.)

P081 QTL analyses of salt and osmotic stress tolerances in sorghum using recombinant inbred lines

☆Yamauchi, T. ¹, H. Takanashi ¹, M. Fujimoto ¹, H. Kanegae ¹, M. Ishimori ¹, M. Kobayashi ², K. Yano ², R. Hijiya ³, N. Ohnishi ³, H. Iwata ¹, W. Sakamoto ³, N. Tsutsumi ¹ (1.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 2.Grad. Sch. Agric., Meiji Univ., 3.Inst. Plant Sci. Resources, Okayama Univ.)

P082 Effect of seed disinfection treatment with hot water on germination and seedling emergence of Hokkaido rice cultivars under low temperature conditions

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

P083 Cytoplasmic diversity in the Tritium-Aegilops complex affecting wheat phenotypes

○Nakamura, C. ¹, S. Takenaka ¹, R. Yamamoto ¹, T. Ikeda ² (1.Faculty of Agriculture, Ryukoku University, 2.Western Region Agricultural Research Center, NARO)

P084 Combined effect of QTL involved in the grain number of high-yield Indica cultivar, VT-101

☆Ota, S. ¹, T. Hobo ², A. Agata ¹, T. Touyama ¹, D. Tran ³, D. Tran ⁴, H. Le ⁴, H. Kitano ² (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Biosci. Biotec. Ctr., Nagoya U., 3.Grad. Sch. IDEC, Hiroshima U., 4.Dep. Mol. Biol. Agric. Genet. Inst., Ha Noi, Vietnam)

P085 Comparative analysis of grain hardness in synthetic hexaploid wheat lines from interspecific crosses between tetraploid wheat and *Aegilops umbellulata*

☆Okada, M. ¹, T. Ikeda ², K. Yoshida ¹, S. Takumi ¹ (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.West. Reg. Agr. Res. Cent., NARO)

P086 Mapping of a genetic region for grain quality affected by high temperature during ripening period from a wild rice species *Oryza glumaepatula*

○Miyahara, K. ¹, H. Hirabayashi ², M. Ishibashi ¹, O. Yamaguchi ¹, T. Wada ¹, M. Miyazaki ³ (1.Fukuoka Agric. Forest. Res. Cent., 2.NICS, 3.Fukuoka Pref. Gover. Office)

P087 Attempts at genetic analysis of capability to control the high accumulation of sucrose in immature seeds of the Dadachamame cultivar 'Shirayama'

☆Iijima, N. ¹, R. Awano ², C. Kamimura ², K. Takiguchi ², T. Kawakami ¹, T. Hoshino ^{1,2} (1.Grad. Sch. Agr., Yamagata Univ., 2.Fac. Agr., Yamagata Univ.)

P088 Development of the edamame mutant library and isolation of early-flowering mutants by using a combination of forward and reverse genetics

☆Takahashi, H. ¹, M. Hata ¹, N. Iijima ², T. Kawakami ², C. Ota ³, T. Ikarashi ³, T. Hoshino ^{1,2} (1.Fac. Agr., Yamagata Univ., 2.Grad. Sch. Agr., Yamagata Univ., 3.Yamagata Okitama Agri. Tech. Improvement Res. Office)

P089 Transfer of an increased Wx-A^{t1} protein of *T. araraticum* to common wheat

○Yamamori, M. (Institute of Crop Science, NARO)

P090 A red pigment derived from naked barley grain

○Abe, D.¹, T. Saito¹, Y. Nogata¹, N. Kohyama², A. Kawaguchi¹, K. Tomioka¹, N. Ishikawa¹, A. Takahashi¹, T. Yoshioka¹ (1.WARC/NARO, 2.NICS/NARO)

P091 Simple and rapid detection of 4-methylthio-3-butenyl glucosinolates from radish seed with Orbitrap LC-MS

Mikawa, T.¹, k. Hamasaki¹, M. Imai¹, T. Oono¹, T. Yokoyama¹, ○M. Ishida² (1.San-Ei Gen F. F. I. Co., Ltd., 2.Institute of Vegetable and Floriculture Science, NARO)

P092 Growths and physiological responses of different rice genotypes as influenced by chemical fertilizers along with *Bacillus pumilus* TUAT1 biofertilizer

☆WIN, K.¹, Y. Ohwaki¹, K. Okazaki¹, T. Kenjyo², T. Asano², E. Yoshikawa³, T. Ookawa³, T. Yokoyama³ (1.Central Region Agricultural research Center, National Agriculture and Food research Organization, 2.Asahi Industries Co.,LTD, 3.Institute of Agriculture, Tokyo University of Agriculture and Technology)

P093 Re-sequencing and SNP analysis of the parental lines of a commercial F1 hybrid cultivar of Chinese cabbage

Shea, D.¹, M. Shimizu², E. Itabashi³, N. Miyaji⁴, M. Kaji⁵, K. Okazaki¹, ○R. Fujimoto⁴ (1.Grad. Sch. Sci. Tech., Niigata Univ, 2.Iwate Biotech. Res. Ctr., 3.Inst. Veget. Floricul. Sci., NARO, 4.Grad. Sch. Agric. Sci., Kobe Univ., 5.Watanabe seed Co., Ltd)

P094 Allelic variation at the domestication gene PROSTRATE GROWTH 1 locus in wild rice

☆Bannai, H., H. Ito, H. Miura, K. Onishi (Univ. Obihiro)

P095 Research for target genes of TAWAWA1, a regulator of rice inflorescence architecture

☆Shindo, M.¹, H. Tokunaga¹, T. Toriba¹, S. Naramoto¹, K. Tanaka³, T. Taji², J. Kyojuka¹ (1.Grad. Sch. Life Sci., Univ. Tohoku, 2.Grad. Sch. Life Sci., Tokyo Univ. of Agri., 3.NGRC., Tokyo Univ. of Agri.)

P096 Identification and characterization of a rice shrinking embryo mutant

☆Sato, A., K. Okazaki, E. Fukai (Graduate School of Science and Technology, Niigata University)

P097 Changes in seed coat permeability regulated by brassinosteroid affect seed longevity after priming treatments

Sano, N. ¹, J. Kim ^{1,2}, Y. Onda ¹, T. Nomura ³, K. Mochida ^{1,4,5}, M. Okamoto ^{2,3}, ○M. Seo ¹ (1.RIKEN CSRS, 2.Arid Land Research Center, Tottori University, 3.Center for Bioscience Research and Education, Utsunomiya University, 4.Kihara Institute for Biological Research, Yokohama City University, 5.Institute of Plant Science and Resources, Okayama University)

P098 RNA-seq analysis of RSD32 mutant with reduced seed dormancy in wheat

○Rikiishi, K., H. Nishimura, M. Maekawa (Inst. Plant Sci. Res., Okayama U.)

P099 Effect of Vernalization genes and Photoperiodic Response genes on spikelet number

○Matsunaka, H. ¹, K. Mizuta ², H. Araki ², K. Nakamura ¹ (1.Kyushu Okinawa Agricultural Research Center, NARO, 2.Grad. Sch. of Tech. for Innov., Yamaguchi Univ)

P100 The research of the molecular phenology of inflorescence development and internode elongation in Wheat

☆Yasukawa, S., H. Tsuji (Kihara Institute for Biological Research, Yokohama City University)

P101 Development of a method to visualize plant hormone distribution in rice

☆Sato, M., N. Fujita, H. Tsuji (KIBR, Yokohama city Univ)

P102 Histological studies on the fertilization and embryogenesis in line cross of Yacon (*Smallanthus sonchifolius*)

○Matsuda, Y., R. Moriyama, T. Murata (Gra. Sch. of Agri. Tokai U.)

P103 Characterization of novel *Restorer-of-fertility 1* allele generated by chromosomal recombination in sugar beet

☆Arakawa, T., T. Ohgami, D. Uchiyama, C. Sano, T. Kubo (Grad. Sch. Sci., Univ. Hokkaido)

P104 Analysis of *erucoides* type CMS in *Brassica oleracea*

☆Fujita, Y. ^{1,2}, S. Shim ¹, T. Ohnishi ^{3,4}, S. Bang ¹ (1.Fac. Agric., Utsunomiya. Univ., 2.United Grad. Sch. Agr., Tokyo Univ., 3.CERCC, Utsunomiya. Univ., 4.PREST, JST)

P105 Effect of unreduced gametes for fertility in interspecific hybrid between *Cymbidium floribundum* and *Cym. lowainum*

Mise, F. ¹, Y. Oohata ², K. Doi ³, ○J. Kato ¹ (1.Fac. Edu, Aichi U. Educ, 2.Grad. Sch. Env. Sci., Hokkaido Univ., 3.Grad. Sch. Bioagr. Sci., Nagoya Univ.)

P106 Interspecific variations in hybrid seed production through crossing tetraploid wheat with pollens of tetraploid *Aegilops* species

○Takumi, S. ¹, T. Ikeda ² (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.West. Reg. Agr. Res. Cent., NARO)

P107 Anther culture of F₁ plants crossing between Kusahonami and Kita-ake rice varieties

○Okamoto, Y., T. Wagatsuma (Univ. Rakuno Gukuen)

P108 Genome-wide association study for the adventitious bud formation from leaves in rapeseed (*Brassica napus* L.)

☆Abe, C. ¹, Y. Makabe ², H. Kitashiba ², T. Nishio ², K. Hatakeyama ¹, Y. Takahata ¹ (1.Fac. Agri., Iwate Univ., 2.Grad. Sch. Agri. Sci., Tohoku Univ.)

P109 Interaction between the germline-specific Argonaute protein MEL1 and multiple nuclear proteins in rice

Liu, H. ¹, ○K. Nonomura ^{1,2} (1.Exp. Farm, Natl. Inst. Genet., 2.Dpt. Life Sci., Grad. U. Adv. Study/SOKENDAI)
