Title of Papers Presented at the 133rd Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 Comparative de novo transcriptomic profiling of salinity stress responsiveness in contrasting pearl millet genotypes

☆Shinde, H. [1], K. Tanaka [2], A. Dudhate [1], D. Tsugama [3], S. Liu [4], T. Takano [1] (1.Asian Natural Environmental Science Centre, The University of Tokyo, 2.The NODAI Genome Research Centre, Tokyo University of Agriculture, 3.Hokkaido University, 4.Northeast Forestry, Univ. China)

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102 Toward integrated analysis of crop growth under different environments: Genetic analysis of growth-related traits of rice using growth model

☆Toda, Y. [1], H. Wakatsuki [2], H. Kajiya-Kanegae [1], M. Yamasaki [3], T. Yoshioka [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)

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103 An efficient genetic analysis of common buckwheat by using the AmpliSeq

☆Takeshima, R. [1], E. Ogiso-Tanaka [1], Y. Yasui [2], K. Matsui [1] (1.Inst. Crop Sci., NARO, 2.Grad. Sch. Agr. Univ. Kyoto)

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104 Whole-genome sequencing-based association study in big-fruited tomato varieties

○Yamamoto, E. [1,2], H. Matsunaga [3], K. Shirasawa [1], S. Isobe [1] (1.Kazusa DNA Research Institute, 2.JST PRESTO, 3.Institute of Vegetable and Floriculture Science, NARO)

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105 Genotyping by whole-genome resequencing across recombinant inbred lines of tomato

○Shirasawa, K. [1], M. Endo [2], K. Tanaka [2], E. Yamamoto [1], M. Hatanaka [2], S. Isobe [1] (1.Kazusa DNA Res Inst, 2.Takii & Co., Ltd.)

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106 Genome-wide analysis on soil-borne disease resistance genes in the wheat variety ‘Shunyou’

○Ishikawa, G. [1], F. Kobayashi [1], H. Maejima [2], Y. Maruyama-Uehara [2], N. Saka [3], R. Suzuki [3], S. Kato [3], T. Tsuji [3], K. Ito [3], Y. Fujita [1], K. Nakamura [4], T. Nakamura [5] (1.NICS/NARO, 2.Nagano Agri. Exp. Sta., 3.Aichi Agri. Res. Cent., 4.KARC/NARO, 5.TARC/NARO)

---

107 Genome wide association study for grain traits using *Oryza rufipogon* population

☆Ta, N., S. Shimizu-Sato, M. Nosaka-Takahashi, T. Suzuki, Y. Sato (National Institute of Genetics)

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108 Sequence differences in the seed dormancy gene *Qsd1* among wheat genomes

○Sato, K. [1], K. Onishi [2], T. Komatsuda [3], J. Wu [3] (1.IPSR, Okayama U., 2.Obihiro U. Agr. Vet. Med., 3.Inst. Crop Sci., NARO)

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109 Nonlinear kernel-based GWAS for testing multiple markers simultaneously

☆Hamazaki, K. [1], H. Kajiya-Kanegae [2], H. Iwata [2] (1.Fac. Agr., U. Tokyo, 2.Grad. Sch. Agr. Life Sci., Univ. Tokyo)

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110 The potential of SNP-set analysis in GWAS using whole-genomic SNPs

☆Ishimori, M. [1], H. Kajiya-Kenegae [1], K. Yamazaki [1], H. Takanashi [1], M. Fujimoto [1], J. Yoneda [2], T. Tokunaga [2], T. Fujiwara [1], N. Tsutsumi [1], H. Iwata [1] (1.Grad. Sch. Agri. Life Sci., Univ. Tokyo, 2.EARTHNOTE Co., Ltd.)

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111 RNA-seq analysis of hybrid necrosis using near-isogenic lines of common wheat

☆Kasazumi, N. [1], K. Yoshida [1], K. Sato [2], S. Takumi [1] (1.Grad. Sch. Agr. Sci., Kobe U., 2.IPSR, Okayama U.)

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112 Genetic basis of extreme heading phenotypes from transgressive segregation in rice

☆Ota, Y. [1], Y. Koide [1], T. Uchiyama [1], S. Sakaguchi [1], A. Tezuka [2], A. Nagano [2], I. Takamure [1], Y. Kishima [1] (1.Res. Fac. Agr., Hokkaido Univ., 2.Fac. Agr., Ryukoku Univ.)

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113 Genome wide association study using literature information

☆Shiota, S. [1], K. Hirano [1], K. Yano [1,5], T. Kotake [2], S. Yoshida [4], H. Kitano [3], M. Matsuoka [1] (1.Plant Molecular Breeding. Bioscience and Biotechnology Center. Nagoya Univ, 2.Division of Life Science. Grad. Sch. Science and Technology Saitama Univ., 3.Bioscience and Biotechnology Center Laboratory of Plant Bioresource. Nagoya Univ, 4.Ryukoku Univ., Res. Inst. for food & Agr., 5.The Laboratory of Plant Nutrition and Fertilizers The University of Tokyo)

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114 Confirmation of association signals through replication in rice

☆Yano, K. [1], K. Hirano [2], H. Kitano [2], G. Tamiya [1], M. Matsuoka [2] (1.RIKEN Ctr. for Advanced Intelligence Project, 2.Bioscience and Biotechnology Ctr., Nagoya U.)

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115 Marker-assisted rapid development and the evaluation of near-isogenic lines with pi21 gene for field resistance to blast in Hokkaido rice cultivars

☆Doman, K. [1], H. Sato [1,2], Y. Hirayama [1], T. Sato [1,3], S. Fukuoka [4], U. Yamanouchi [4], J. Tanaka [4], J. Yonemaru [4] (1.Kamikawa Agri. Exp. Stn., HRO, 2.Central Agri. Exp. Stn., HRO, 3.Donan Agri. Exp. Stn., HRO, 4.NICS)

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116 Effect of deep-rooting allele of *DRO1* on yield traits in rice shallow-rooting CSSLs

☆Kitomi, Y., Y. Arai-Sanoh, M. Okamura, Y. Uga (NICS)

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117 Genomic fossils in grass species reveal adaptation of nonautonomous pararetroviruses

Chen, S., ○Y. Kishima (Research Faculty of Agriculture, Hokkaido University)

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118 QTL analysis of ultra-late bolting in lettuce cultivar using RAD-seq

○Seki, K. (Nagano Vegetable and Ornamental Crops Experiment Station)

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201 Diversity analysis of Japanese domestic barley by RNA-Seq and its application to barley breeding

○Tanaka, T. [1], G. Ishikawa [1], E. Ogiso [1], T. Yanagisawa [1], K. Sato [2] (1.NICS, 2.Okayama Univ.)

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202 RNA-seq based discovery of genome-wide polymorphisms in einkorn wheat and their utility

☆Michikawa, A. [1], K. Yoshida [1], K. Sato [2], S. Takumi [1] (1.Grad. Sch. Agr. Sci., Kobe U., 2.IPSR, Okayama U.)

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203 Resequencing *Asparagus officinalis* genome with MinION

☆Tsugama, D., K. Fujino (Res. Fac. Agr., Hokkaido Univ.)

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204 Constitutive expression of HKTs from Sporobolus virginicus in plants makes it possible to use sodium as substitution for potassium

○Tada, Y., C. Endo, T. Kurusu (Sch. Biosci. Biotechnol.)

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205 Environment-driven statistic modelling of field transcriptome using Koshihikari leaves grown at multiple sites in Japan

○Izawa, T. [1,2], J. Matsuzaki [2], H. Itoh [2,3], . Koshihikari Field Sampling Volunteer Researchers [4] (1.Grad. Sch. Agr. & Life Sci., U-Tokyo, 2.NIAS, 3.NARO, 4.Local Agri. Reasearch Sta./Univ./NARO)

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206 Modeling by Deep Learning of Flowering-related Gene Dynamics in Rice Under Field Conditions Using Climate Data

☆Hosokai, T., T. Izawa (Grad. Sch. Agr. & Life Sci., U-Tokyo)

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207 *In vitro* analysis of direct targets of ER stress transducer AtbZIP28

○Kawakatsu, T., S. Hayashi, Y. Wakasa (Institute of Agrobiological Sciences, NARO)

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208 Evaluation of diversity of Triticum-Aegilops cytoplasm based on submergence tolerance

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

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209 Constitutive aerenchyma formation in roots enhances tolerance of maize to oxygen deficiency stress

☆Gong, F. [1,2], H. Takahashi [1], W. Wang [2], F. Omori [3], Y. Mano [3], M. Nakazono [1] (1.Graduate School of Bioagricultural Sciences, Nagoya University, 2.Henan Agricultural University, 3.NARO Institute of Livestock and Grassland Science)

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210 Characterization of rice resistance genes using international standard differential blast isolates

○Fukuta, Y. [1], K. Kobayashi [1], N. Hayashi [2], N. Kobayashi [3] (1.TARF/JIRCAS, 2.NIAS/NARO, 3.NICS/NARO)

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211 Reactions of bacterial blight in japonica rice variety, Koshihikari. IV. QTL analysis of lesion elongation in RILs rose from cross IR24 and Koshihikari

○Taura, S. [1], K. Hatanaka [2], C. Busungu [3], Y. Kawaguchi [2], K. Ichitani [2] (1.Div. Gene Res., Kagoshima U., 2.Fac. Agri., Kagoshima U., 3.Uni. Grad. Sch. Agri. Sci, Kagoshima U.)

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212 Development of SNP genotyping system for blast resistance in rice

☆Kitazawa, N. [1], A. Shomura [1], T. Mizubayashi [1], T. Ando [1], K. Nagata [1], N. Hayashi [2], A. Takahashi [2], U. Yamanouchi [1], S. Fukuoka [1] (1.Inst. Crop Sci., NARO, 2.Inst. Agrobiol. Sci., NARO)

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213 Quantitative resistance allele differentiated at Pid3 locus concerning with qualitative resistance to rice blast isolates

Nagashima, S., M. Kato, ○T. Inukai (Res. Fac. Agri., Hokkaido Univ.)

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214 Genetic variation for degrees of dry panicles by typhoon’s damage in introgression lines of rice

☆Tomita, A. [1], M. Uddin [2], M. Obara [3], H. Saito [1], Y. Fukuta [1] (1.TARF, JIRCAS, 2.North South University, 3.JIRCAS)

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215 Genomics of salt tolerance in a wild species Vigna trilobata

○Naito, K. [1,2], H. Sakai [1], N. Tomooka [1] (1.NARO, 2.JST PRESTO)

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216 Difference in weed suppression abilities among soybean accessions showing different canopy development speed and their petiole length

○Kurokawa, S. [1], A. Kaga [2], D. Sekine [2], M. Tsuda [3] (1.CARC, NARO, 2.NICS, 3.GRC, Univ. Tsukuba)

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217 Field validation of the test method and DNA marker for selection of soybeans tolerant to seed coat discoloration under chilling temperature

○Yamaguchi, N. [1], S. Hagihara [2], M. Okuyama [2], D. Hirai [3], M. Senda [4] (1.Tokachi Agr. Exp. Sta., HRO, 2.Kitami Agr. Exp. Sta., HRO, 3.Central Agr. Exp. Sta., HRO, 4.Fac. Agric.

Life Sci., Univ. Hirosaki)

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218 Occurrence and tolerance mechanisms of seed cracking under low temperature in soybean

○Senda, M. [1], M. Kawasaki [1], H. Maeda [1], M. Hiraoka [1], K. Yamashita [1], S. Hagihara [2], N. Yamaguchi [3] (1.Fac. Agric. Life Sci., Univ. Hirosaki, 2.Kitami Agr. Exp. Sta., HRO, 3.Tokachi Agr. Exp. Sta., HRO)

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219 Ethanol treatment enhances heat, drought and salt stress tolerance in plants

☆Sunaoshi, Y. [1,2], A. Matsui [2], K. Sako [2,3], H. Nguyen [1,2], K. Bashir [2,3], Y. Habu [5], C. Ha [2,3], S. Rasheed [2], M. Tanaka [2], K. Mizunashi [2], M. Seki [2,3,4] (1.Grad. Sch. Nano-Bio., Yokohama City Univ., 2.Plant Genomic Network R.T., CSRS, RIKEN, 3.JST, CREST, 4.Kihara Inst., Yokohama City Univ., 5.NARO)

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301 Heading date and eating quality of a srain bred by newly pyramiding an early maturity gene to 4 genes pyramided rice variety "Iwate117"

○Nakajo, S. [1], A. Abe [2], T. Uemura [3], T. Saito [1], A. Nakanishi [4], T. Kodate [1], Y. Ota [1] (1.Iwate Agric. Res. Ctr., 2.Iwate Biotech. Res. Ctr., 3.Aomori Pref. Ind. Tech. Res Ctr., 4.Iwate Cent. Ext. Ctr.)

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302 Genetic diversity of Aoso (*Boehmeria nivea*), a traditional industrial crop in Oe town in Yamagata Prefecture, revealed by DNA markers

☆Nishida, Y. [1], H. Murakami [2], R. Takahashi [3], J. Matsuda [4], T. Sasanuma [1] (1.Fac. Agr., Yamagata Univ., 2.Aoso Revival Dreaming Corps, 3.Oe Town Revitalization Cooperation Corps, 4.Board of Education, Oe Town)

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303 Linkage analysis of genes causing hybrid chlorosis found in hybrid between wild rice accessions in Asia and Australia

Hoki, R. [1], M. Uemura [1], Y. Ikemoto [1], S. Taura [2], ○K. Ichitani [1] (1.Fac. Agr., Kagoshima Univ., 2.Inst. Gene Res., Kagoshima Univ.)

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304 Growth characters of 80 durum wheat strains derived from around the world by NBRP-KOMUGI

○Murai, K. [1], M. Nitta [2], S. Takenaka [3], S. Nasuda [2] (1.Fac. Biosci. Biotech., Fukui Pref. U., 2.Grad. Sch. Agr., Kyoto U., 3.Fac. Agr., Ryukoku U.)

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305 Evaluation on genetic diversity of basic agricultural and bread-making related traits in bread wheat genetic resources collected in Qinghai Province, China

○Sasanuma, T. [1], K. Sawada [1], H. Tanaka [2], K. Sato [3], K. Takata [4], M. Zhu [5], C. Long [5] (1.Fac. Agr., Yamagata Univ., 2.Fac. Agr., Tottori Univ., 3.IPSR, Okayama Univ., 4.WARC, NARO, 5.Minzu Univ. China)

---

306 Interspecific relationship in section Sitopsis of Aegilops revealed by RNA-seq analysis and its implication to the B-genome donor of common wheat

☆Miki, Y. [1], K. Yoshida [1], K. Sato [2], S. Takumi [1] (1.Grad. Sch. Agr. Sci., Kobe U., 2.IPSR, Okayama U.)

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307 Genetic studies on Bambuseae species in Japan XLII (42). Consideration on Kumazasa plants in Japanese culture, and a species *Sasa veitchii*

○Muramatsu, M. (Univ. Okayama)

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308 Evaluation of genetic diversity in Ethiopian rice cultivars based on nuclear and cytoplasmic DNA molecular markers

☆Lakew, T. [1,2], R. Ishikawa [3] (1.UGAS, Iwate Univ., 2.Ethiopian Inst. of Agri. Res., Ethiopia, 3.Fac. Agri. Life Sci., Hirosaki Univ., Bunkyo-cho 3, Hirosaki, Aomori, Japan)

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309 Evaluation of high-GABA tomato generated via CRISPR/Cas9 as a breeding material for hybrid cultivar

☆Lee, J. [1], S. Nonaka [2,3], M. Takayama [2], H. Ezura [2,3] (1.Grad. Sch. Life. Env. Sci., Univ. Tsukuba, 2.Life. Env. Sci., Univ. Tsukuba, 3.T-PIRC., Univ. Tsukuba)

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310 Genetic diversity in agronomic and tuber quality traits of white guinea yam

○Iseki, K. [1], R. Matsumoto [2], S. Yamanaka [1], S. Muranaka [1] (1.JIRCAS, 2.IITA)

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311 "Kachidoki", a new high-yielding kintoki bean variety

○Nakagawa, K. [1], Y. Saito [1], M. Okuyama [2], S. Ebe [3], H. Shimada [2], H. Sato [1] (1.Tokachi Agri. Exp.Sta., HRO, 2.Kitamii Agri. Exp.Sta., HRO, 3.Central Agri. Exp.Sta., HRO)

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312 Breeding and characterization of brewing rice line "Akitasake 120"

☆Takahashi, R. [1], S. Shibata [1], T. Ohno [2], M. Kodama [2], K. Kato [1], T. Kawamoto [1] (1.Akita Pref. Agr. Exp. Sta., 2.Akita Re. Inst. Food Brewing)

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313 “Chikushi kona 85”, a new rice cultivar for flour with high resistant starch content in grain

○Yamaguchi, O. [1], M. Ishibashi [1], K. Miyahara [1], T. Wada [1], M. Tsubone [1], T. Inoue [2], T. Ogata [3], M. Miyazaki [4] (1.Fukuoka Agric. Forest. Res. Cent., 2.Fukuoka Pref. Kitakyushu Agric. Ext. Cent., 3.Fukuoka Agric. Forest. Res. Cent. Buzen Branch, 4.Fukuoka Pref. Gover. Office)

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314 Diversity in the frequency of non-dormant individuals among wild tetraploid wheat populations in southern Turkey

○Ohta, S. [1], N. Mori [2], H. Ozkan [3] (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.Grad. Sch. Agric. Sci., Kobe Univ., 3.Fac. Agric., Cukurova Univ., Turkey)

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315 Distribution of *Arisaema* plants in ruins of fortresses used in medieval Japan

○Tanesaka, E. (Fac. Agric. Sci., Kindai Univ.)

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316 Long days increase days to flowering, yield and vegetative growth in early flowering Sri Lankan rice accessions

○Geekiyanage, S. [1], P. Padukkage [2], G. Senanayake [1] (1.Faculty of Agriculture, University of Ruhuna, 2.Faculty of Graduate Studies, University of Ruhuna)

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317 Canceled

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318 Genetic analysis of early flowering Sri Lankan traditional rice for flowering time and morphological characters

☆Padukkage, D. [1], G. Senanayake [2], S. Geekiyanage [3] (1.Faculty of Gradute Studies, University of Ruhuna, Matara, Sri Lanka, 2.Dept. of Agric. Biology, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka, 3.Dept. of Agric. Biology, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka)

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401 Estimation of genome region related to the difference in eating quality between ‘Takanari’ and ‘Koshihikari’ using the CSSLs

○Tanaka, J., K. Suzuki, K. Hori (NICS)

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402 Selection of higher yield rice mutant lines by gamma ray irradiation, part2

○Kato, H., F. Li, A. Shimizu (Radiation Breeding Division, Institute of Crop Science, NARO)

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403 The effects of rice high-yielding QTL, *Gn1a*, *SCM2*, and *qSUP8*, on yield componets under 2 nitrogen conditions

☆Teramoto, S. [1], H. Kitano [2], T. Fujiwara [1] (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Biosci. Biotec. Ctr., Nagoya U.)

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404 Eating quality of new rice cultivar "Ichihomare"

☆Machida, Y., A. Kobayashi, F. Nakaoka, Y. Morozumi, K. Tomita (Fukui Agr. Exp. Stn.)

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405 Evaluation of natural variation and detection of genetic loci for endosperm enzyme activity of polished rice grain in a Japanese rice cultivars

○Hori, K. [1], K. Iijima [1], K. Suzuki [1], Y. Tsujii [2], K. Kimura [2], K. Shu [1], K. Ebana [3], K. Takano [2], J. Yonemaru [1] (1.NICS, 2.Tokyo Univ. Agric., 3.NGRC)

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406 Thermo-responsive allele of *Sucrose synthase 3* (*Sus3*) provides high-temperature tolerance during ripening stage in rice (*Oryza sativa* L.)

☆Takehara, K. [1], K. Murata [2], T. Yamaguchi [2], K. Ymaguchi [1], G. Chaya [1], S. Kido [1], Y. Iwasaki [1], H. Ogiwara [3], T. Ebitani [2], K. Miura [1] (1.Dep, Biosci., Fukui Pref, Univ, 2.Toyama Pref. Agr. For. & Fis. Res. Cent, 3.Institute of Crop Science, NARO)

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407 Effects of QTLs for heat-induced quality decline of rice grain in different genetic backgrounds

○Kobayashi, A. [1], K. Maruyama [2], T. Sakurai [3], K. Tomita [1] (1.Fukui Agr. Exp. Stn., 2.JIRCAS, 3.Mul. Sci., Kochi Univ.)

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408 Difference in endosperm starch structure of rice grown in different cropping seasons

☆Kato, K. [1,3], Y. Hosaka [2], A. Sayama [1], M. Ito [1], T. Kumamaru [3], N. Fujita [2] (1.Agric. Exp. Sta. Akita, 2.Fac. Biores. Sci. Akita Pref. Univ., 3.Fac. Agr., Kyushu Univ.)

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409 Breeding of lodging tolerant soybean (Glycine max) lines using short internode trait

☆Oki, N. [1], T. Sayama [2], F. Taguchi-Shiobara [3], A. Fukuda [3], Y. Yokota [3], T. Shimizu [1], A. Kaga [3], M. Ishimoto [3], M. Takahashi [1], Y. Kono [4], M. Takahashi [3] (1.NARO, KARC, 2.NARO, WARC, 3.NARO, NICS, 4.NARO, CARC)

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410 QTL analysis for a high seed α-tocopherol ratio in wild soybean

☆Park, C. [1], M. Dwiyanti [1], A. Nagano [2], T. Yamada [1], J. Abe [1] (1.Research Faculty of Agriculture, Hokkaido University, 2.Faculty of Agriculture, Ryukoku University)

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411 Relationship between the genotype of soybean PME gene and the hardness of cooked beans

○Toda, K., K. Hirata, R. Masuda, T. Yasui, T. Yamada, K. Takahashi, T. Nagaya, M. Hajika (National Agriculture and Food Research Organization)

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412 Antioxidant content and anti-oxidative stress activities of Japanese soybeans accession

☆Arifin, H. [1], K. Nagahama [2], M. Hashiguchi [2], H. Tanaka [3], Y. Sakakibara [2], R. Akashi [1,2,3] (1.Interdisciplinary Grad Sch of Agriculture and Engineering, Univ of Miyazaki, 2.Faculty of Agriculture, Univ of Miyazaki, 3.IR Center for the Promotion of Institutional Research)

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413 The γ-oryzanol content of brown rice and polished rice in genetic resources including the world and japan core collections

○Araki, E. [1], Y. Suzuki [2], R. Masuda [1], K. Sawada [3], Y. Harada [3], H. Hashimoto [3], K. Ebana [4] (1.NARO, ICS, 2.NARO, BRAIN, 3.Tsuno Food Indust. Co., Ltd., 4.NARO, GRC)

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414 Improving miraculin productivity in transgenic tomato fruit by cross breeding

☆Suzuki, T. [1], K. Tanase [2], H. Ezura [2] (1.Grad. Sch. Lif. Env. Sci., Univ. Tsukuba, 2.Facu. Lif. Env. Sci., Univ. Tsukuba)

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415 Isolation and Characterization of Micro-Tom GAD3 mutants by TILLING

☆Kitazawa, N. [1], Y. Okabe [2], M. Takayama [2], H. Ezura [2] (1.Sch. Life and Environmental Sci, Univ. Tsukuba, 2.Fac. Life and Environmental Sci, Univ.Tsukuba)

---

416 Genetic variation and correlation network analysis of chemical components in tea shoots

☆Yamashita, H. [1], S. K. Panda [2], A. Nakamura [3], H. Katai [4], T. Ohnishi [1,3], A. Morita [1,3], T. Ikka [1,3] (1.Graduate School of Agriculture, Shizuoka University, 2.Department of Life Science & Bioinformatics, Assam University, 3.Faculty of Agriculture, Shizuoka University, 4.Tea Research Center, Shizuoka Prefecture)

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417 Practical use of two high amylose rice lines. 1. starch properties and use

○Fujita, N., N. Crofts, Y. Hosaka, M. Abe, Y. Nakaizumi (Facult. Biores.; Akita Pref. Univ.)

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418 Practical use of two high amylose rice lines. 2. Agricultural characteristics and structure of starch

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

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419 Analyses of protein complex formation and characterization of starch properties in *ss2a* null mutant rice

☆Miura, S. [1], N. Crofts [1], Y. Saito [2], Y. Hosaka [1], N. Oitome [1], T. Watanabe [2], T. Kumamaru [3], N. Fujita [1] (1.Facult. Biores., Akita Pref. Univ., 2.Rice Resarch Center. Kameda Seika Co., Ltd., 3.Facult. Agri., Kyushu Univ.)

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501 Analysis of heavy-ion beam-induced mutations in unselected rice populations by exome sequencing

☆Ichida, H., R. Morita, Y. Shirakawa, Y. Hayashi, T. Abe (RIKEN Nishina Center)

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502 Effect of LET on mutational function revealed by whole-genome resequencing of Arabidopsis mutants

○Kazama, Y. [1], K. Ishii [1], T. Hirano [1,2], T. Wakana [1], M. Yamada [1], S. Ohbu [1], T. Abe [1] (1.RIKEN Nishina Cent., 2.Fac. Agric., Univ. Miyazaki)

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503 Is "Genome Mixer"-base successive outcrossing system available on simplified biotron breeding system (sBBS) which is a rapid generation-advancement in rice?

○Taniguchi, Y. [1], M. Akasaka [2], M. Oshima [1,3], Y. Tabei [1], J. Yonemaru [4], J. Tanaka [4] (1.NIAS, 2.TARC, 3.T-PIRC, 4.NICS)

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504 GBS pipeline for low-cost breeding facilitated by the error correction using hidden molkov model

☆Furuta, T., R. Stefan, M. Ashikari (Molecular Biosystems Laboratory, Bioscience and Biotechnology Center, Nagoya University)

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505 Construction of a breeding support system that automates a series of analysis from genotyping to genomic selection

☆Ogiso-Tanaka, E., S. Yabe (National Agriculture and Food Research Organization Institute of Crop Science, NARO)

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506 Improvement of a multi-spectral sensing method and its application to evaluation of drought stress response in soybean

☆Sasaki, G. [1], Y. Toda [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. Tsukuba, 5.NICS)

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507 Genomic prediction of field performance of rice gene bank accessions based on phenotype data from IRRI and Madagascar

☆Tanaka, R. [1], J. King [1], M. Wissuwa [2], H. Kajiya-Kanegae [1], H. Iwata [1] (1.Grad. Sch. Agric. Life Sci., U. Tokyo, 2.JIRCAS)

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508 Network analysis of phenotype and environmental value in soybean growth

○Tanabata, T. [1], S. Isobe [1], A. Hayashi [1], H. Tanaka [2], M. 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)

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509 Classification of strawberry fruit shape by Machine learning

Ishikawa, T. [2], A. Hayashi [1], S. Nagamatsu [3], Y. Kyutoku [2], I. Dan [2], K. Oku [3], Y. Saeki [3], S. Uto [3], T. Wada [3], T. Tanabata [1], S. Isobe [1], ○N. Kochi [1,2] (1.Kazusa DNA Research Institute, 2.Chuo University, 3.Fukuoka Agriculture and Forestry Research Center)

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510 Heterosis measurement initiative under sugar beet field trial

○Taguchi, K. [1], W. Guo [2], A. Itoh [1], T. Fukatsu [3], M. Hirafuji [2] (1.NARO-HARC, 2.University of Tokyo, 3.NARO-IAM)

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511 Haplotype-based genomic prediction of a grain shape using MAGIC population in rice

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

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512 Favorable measurement conditions of canopy temperature (CT) for indirect selection of potential yield in early generation

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

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513 Genome editing in rice by direct delivery of CRISPR/Cas9 vector or ribonucleoprotein complexes into zygotes

☆Toda, E. [1,2], N. Koiso [2], A. Takebayashi [1], M. Ichikawa [3], T. Kiba [1], Y. Osakabe [1,4], T. Okamoto [1,2], N. Kato [1,2,3] (1.RInC, RIKEN, 2.Department of Biological Sciences, Tokyo Metropolitan Univ., 3.Plant Innovation Center, Japan Tobacco Inc., 4.Faculty of Bioscience and Bioindustry, Tokushima Univ.)

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514 A meristem-targeted method for cultivar-independent genome editing

Hamada, H. [1,2], Q. Linghu [1], Y. Liu [3], ○Y. Nagira [2], R. Miki [2], N. Taoka [2], R. Imai [1,3] (1.HARC, NARO, 2.KANEKA Co., Ltd., 3.NIAS)

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515 Analysis of mechanisms connecting histone modifications and DNA methylation in rice

Numa, H. [1], D. Ogawa [2], H. Matsusaka [3], T. Kumamaru [3], ○Y. Habu [4] (1.NAAC, NIAS, 2.NICS, NARO, 3.Facul. Agr., Kushu Univ., 4.NIAS, NARO)

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516 Function of ESP1/eRF1 in the translation of prolamin polypeptides in rice endosperm

☆Elakhdar, A. [1], T. Ushijima [1], M. Fukuda [1], N. Yamashiro [1], Y. Kawagoe [2], T. Kumamaru [1] (1.Institute of Genetic Resources, Faculty of Agriculture, Kyushu University, 2.Division of Plant Sciences, National Institute of Agrobiological Sciences, Tsukuba)

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517 Functional analysis of *Prl5*, which is a gene for panicle length in rice

☆Agata, A. [1], T. Hobo [2], K. Ando [1], Y. Fujishiro [1], M. Ikeda [2], M. Matsuoka [2], K. Doi [1], H. Kitano [2] (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Biosci. Biotec. Ctr., Nagoya U.)

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518 Challenges in production of phosphorus hyperaccumulated rice by introducing phosphorus metabolism related genes

☆Kajiwara, T., S. Tanigaki, K. Yoshida (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

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601 Developmental plasticity of lateral root formation by root tip excision in rice

Kawai, T. [1], T. Kojima [1], A. Yamauchi [1], ○Y. Inukai [2,3] (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.ICCAE, Nagoya U., 3.PRESTO, JST)

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602 Analysis of meristem maintenance regulation in rice using an enhancer mutant of *floral organ number2*

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

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603 Roles of meristem-related genes in axillary bud formation in rice

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

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604 Analysis of a rice mutant that shows pleiotropic defects in the leaf

☆Kubo, F. [1], Y. Yasui [1], T. Kumamaru [2], H. Hirano [1] (1.Grad. Sch. Sci., Univ. Tokyo, 2.Fac. Agri., Kyushu Univ.)

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605 Yearly instability of heading time in a RILs population of two barley varieties which have different stability against climatic fluctuation

○Nishida, H. [1], S. Yokota [1], E. Aoki [2], K. Kato [1] (1.Grad. Sch. Environ. Life Sci., Okayama U., 2.NICS)

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606 Crosstalk between salt stress signaling and photoperiodic flowering in rice

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

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607 Sugar beet BLOND can shorten generation

○Kuroda, Y., K. Taguchi, K. Okazaki, H. Takahashi, T. Kuranouchi (HARC, NARO)

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608 Effects of the cytoplasm from a relative species *Aegilops mutica* on the spike structure in 14 Japanese bread wheat cultivars

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

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609 Male gametophyte development in three species of *Brassica* crops carrying *Diplotaxis erucoides* cytoplasm

☆Fujita, Y. [1,2], S. Shim [1], T. Onishi [3,4], S. Bang [1,2] (1.Sch. Agric., Utsunomiya. Univ., 2.United Grad. Sch. Agr., Tokyo Univ., 3.CERCC, Utsunomiya. Univ., 4.PREST, JST)

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610 An MLPK-independent self-incompatibility mechanism in *Brassica rapa*

☆Ohata, M. [1], Y. Takada [1], K. Murase [2], H. Shiba [3], S. Takayama [2], G. Suzuki [4], M. Watanabe [1] (1.Grad. Sch. Life Sci., Tohoku Univ., 2.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 3.Grad. Sch. Life and Env. Sci., Univ. Tsukuba, 4.Div. Natl. Sci., Osaka Kyoiku Univ.)

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611 Dominance relationships between *S*-haplotypes in rocal turnip "Seinaiji-Akane" in Nagano, Japan

☆Suda, G. [1], S. Ooka [2], Y. Park [4], M. Minami [2], K. Matsushima [3], K. Nemoto [3] (1.Grad. Sch. Sci. Tech., Shinshu Univ, 2.Fac. Agric. Shinshu Univ, 3.Inst. Agric. Acad. Assy. Fac., Shinshu Univ, 4.Roral Research, Korea Rural Community Corporation)

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612 Evolutionary aspects of *Restorer-of-fertility 1* gene in sugar beet

☆Arakawa, T., T. Katsuyama, H. Sugaya, Y. Honma, C. Sano, T. Kubo (Grad. Sch. Sci., Univ. Hokkaido)

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613 Incompatibility of the NWB organellar genome of radish and the nuclear genome of *Brassica rapa*

☆Takayama, T. [1], K. Akaishi [1], S. Shim [1], T. Ohnishi [2,3], S. Bang [1] (1.Sch. Agric., Utsunomiya. Univ., 2.CERCC, Utsunomiya. Univ., 3.PREST, JST)

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614 Genetic analysis of a novel interaction for cytoplasmic male sterility and its fertility restoration in the progeny between Asian and African rice

☆Kanaoka, Y. [1], Y. Yamagata [2], S. Chen [1], S. Kikuchi [1], Y. Koide [1], H. Yasui [2], A. Yoshimura [2], Y. Kishima [1] (1.Grad. Sch. Agric., Univ. Hokkaido, 2.Grad. Sch. Agric., Univ. Kyushu)

615 Comparative analysis of reproductive isolation observed in interspecific-interploidy crosses between two accessions of *Nicotiana suaveolens* and *N. tabacum*

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

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616 Analysis on the zygotic chromosome breakage induced by the gametocidal gene *Gc2-4S* ^{sh} in wheat

☆Yamada, H., S. Nasuda (Grad. Sch. Agr., Univ. Kyoto)

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617 Analysis of interaction between the gametocidal chromosome 3C ^{t} and its inhibitor *Igc1*

☆Murata, K., S. Nasuda (Grad. Sch. Agr., Univ. Kyoto)

Poster presentations

P001 Comparison of quantification methods for genomic prediction of contour shape

☆Sakamoto, L. [1,2], H. Kajiya-Kanegae [1], K. Noshita [1,3], M. Ishimori [1], M. Kobayashi [4,5], M. Fujimoto [1,5], H. Takanashi [1,5], A. Nagano [3,6], T. Sazuka [5,8], K. Yano [4,5], T. Tokunaga [7], N. Tsutsumi [1,5], H. Iwata [1,5] (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.JSPS Research Fellow, 3.PRESTO, JST, 4.Fac. Agr., Meiji Univ., 5.CREST, JST, 6.Cent. Ecol. Res., Kyoto Univ., 7.EARTHNOTE Co., Ltd., 8.Biosci. Biotech. Cent., Nagoya Univ.)

P002 Inferring mode of inheritance of fruit weight, sugar content and acid content in citrus

○Imai, A. [1,5], A. Narita [2,3], T. Hayashi [4,5] (1.Institute of Fruit Tree and Tea Science, NARO, 2.Tohoku University Tohoku Medical Megabank Organization, 3.StaGen Co., Ltd., 4.Institute of Crop Science, NARO, 5.Graduate School of Life and Environmental Sciences, University of Tsukuba)

P003 Characterization of the F2 progeny of the interspecific hybrid between the tetraploid Lotus japonicus and the Super Root-derived Lotus corniculatus

☆Puspasari, R. [1], M. Hashiguchi [2], G. Ishigaki [2], H. Tanaka [3], R. Akashi [1,2,3] (1.Interdisciplinary Grad Sch of Agriculture and Engineering Univ of Miyazaki, 2.Faculty of Agriculture, Univ of Miyazaki, 3.Center for the Promotion of Institutional Research)

P004 A comparison of image analysis methods to segmentate adjacent rice kernels

☆Shiokawa, K. [1], K. Doi [1], S. Nishiuchi [1,2] (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.JST PRESTO)

P005 New evaluation method of cooked rice for industrial rice cooking

☆Nakagomi, Y. [1], T. Endo [1], H. Sato [1], Y. Ishimori [1], T. Okunishi [2] (1.Miyagi Pref. Furukawa Agric. Exp. Stn., 2.Food Research Institute, NARO)

P006 Selection of structural variation detection programs for comprehensive detection of mutations induced by heavy-ion beams in rice

○Morita, R. [1], H. Ichida [1], K. Ichinose [1], Y. Shirakawa [1], Y. Hayashi [1], T. Sato [1,2], T. Abe [1] (1.RINEN Nishina Cent., 2.Grad. Sch. Agric., U. Tohoku)

P007 The effects of *sugary1* and *sugary2* mutation on rice endosperm starch

☆Nakamura, T., T. Kumamaru (Grad. Sch. Agr., Univ. Kyushu)

P008 Breeding of a extremely low hardening speed glutinous rice variety "Aichimochi 126" with lack of starch branching enzyme I

☆Suzuki, T. [1], M. Nakamura [1], T. Umemoto [3,4], A. Ikeda [2], T. Kato [1] (1.Aichi Agri. Res. Cent. Mount. Reg. Agri. Res. Inst., 2.Aichi Agri. Res. Cent., 3.NARO, NICS, 4.NARO, HARC)

P009 Breeding of "Hyuga-kabocha" squash of Miyazaki original vegetable—selection of new lines matching aim at the biginning from offspring of interspecific hybrids

○Chen, L. [1,2], T. Hori [1], S. Jokan [1], Y. Iwamoto [2], K. Goto [2] (1.Fac. Envir. Hort. Sci., Minami Kyushu U., 2.Grad. Sch. Hort. Food Sci., Minami Kyushu U.)

P010 Breeding of a new azuki bean caltivar "Erimo167" with resistance to brown stem rot by marker-assisted backcrossing

○Horiuchi, Y. [1], H. Sato [1], F. Kosaka [1], A. Tazawa [2], H. Shimada [3], S. Aoyama [3], R. Ogura [4], T. Suzuki [5] (1.Tokachi Agri. Exp. Stn., HRO, 2.Donan Agri. Exp. Stn., HRO, 3.Kitami Agri. Exp. Stn., HRO, 4.Central Agri. Exp. Stn., HRO, 5.HRO Headquarters)

P011 Development of a new SCN resistant soybean variety ‘Suzumaru R’ for Natto selected by backcrosses recurrently with molecular marker-assisted selection

○Kurosaki, H., S. Fujita, S. Onishi, F. Kosaka, Y. Tanaka, T. Takeuchi, T. Kiguchi, Y. Yamashita, S. Hiura (Hokkaido Researech Organization Central Agricultural Experiment Station)

P012 Breeding of “Sadowara” eggplant of Miyazaki original vegetable-characteristic examination of innerspecific and interspecific hybrid offspring

☆Yoshimura, K. [1], N. Emoto [2], T. Hiejima [1], L. Chen [1,2] (1.Grad. Sch. Hort. Food Sci., Minami Kyushu U., 2.Fac. Envir. Hort. Sci., Minami Kyushu U.)

P013 Breeding of a new potato variety 'Aimasari' with high yield, large tubers and combined resistance to disease and pest for warm region

☆Sakamoto, Y. [1], Y. Matsuo [1], M. Ryu [1], K. Mori [2], T. Nakao [3], N. Mukojima [4], S. Tamiya [3], W. Watanabe [5], N. Sobaru [1], M. Chaya [1] (1.Nagasaki Agri. & Forestry Tech. Dev. Ctr., 2.Nagasaki Agri. & Forestry Dep., 3.Hokkaido Agri. Res. Ctr., NARO, 4.Nagasaki Ken'ou Dev. Bur., 5.Nagasaki Goto Dev. Bur.)

P014 Breeding a new Sake-brewing rice cultivar "Hyogo Sake 85"

○Ikegami, M., T. Sugimoto, H. Fujimoto, T. Nonoguchi, S. Kubota, A. Miyoshi (Hyogo Pre. Tech. Cent. Agr. Forest. Fish.)

P015 A New Red Kidney Bean Cultivar “Kita Rosso” for Salads and Stews

○Saito, Y. [1], H. Sato [1], K. Nakagawa [1], M. Okuyama [2], H. Shimada [2] (1.Tokachi Agri. Exp. Sta., HRO, 2.Kitami Agri. Exp. Sta., HRO)

P016 Breeding of Quercetin glycoside-rich leaf lettuce "TS-815, TS-816"

○Nomura, K. [1], N. Nakashima [2], Y. Honzawa [2], I. Tokita [2], F. Sato [3] (1.Institute for Innovation, Ajinomoto Co., Ltd., 2.Tokita Seed Co., Ltd., 3.Institute of Vegetable and Floriculture Science, NARO)

P017 Approach to breeding of Miyazaki original melon—collection and screening of the parent materials and their crossing experiments—

○Komoriyama, S. [1], K. Yamawaki [2], L. Chen [1,2] (1.Grad. Sch. Hort. Food Sci., Minami Kyushu U., 2.Fac. Envir. Hort. Sci., Minami Kyushu U.)

P018 Screening of useful mutants in rice by radiation of heavy-ion beams

○Endo, T. [1], H. Sato [1], Y. Ishimori [1], Y. Nakagomi [1], T. Sato [2], Y. Hayashi [3], H. Ichida [3], T. Abe [3] (1.Miyagi Pref. Furukawa Agric. Exp. Stn., 2.Grad. Sch. Agri. Sci., Tohoku Univ., 3.RIKEN Nishina Center)

P019 Evaluation of morphological traits and genetic diversity of wild soybean (*Glycine soja*) accessions in Japan

☆Chotekajorn, A. [1], H. Tanaka [2], M. Hashiguchi [3], R. Akashi [3] (1.Grad. Sch. Agri. Eng., Univ. Miyazaki, 2.Cent. Prom. Inst. Res., Univ. Miyazaki, 3.Fac. Agri., Univ. Miyazaki)

P020 Field survey on minor millets in Madhya Pradesh state of India

○Tsuji, K. [1], L. Rajput [2], R. Joshi [2], V. Paradkar [2], R. Barpete [2], P. Parihar [2], R. Thakur [2], S. Nahatkar [2], D. Khare [2] (1.Fac. Edu., Chiba Univ., 2.Jawaharlal Nehru Agricultural Univ.)

P021 Screening of suitable mutants of Yamadanishiki in Fukui and its evaluation

☆Yamaguchi, K. [1], K. Takehara [1], S. Kido [1], K. Takagi [2], Y. Iwasaki [1], K. Miura [1] (1.Dept. Biosci., Fukui Pref. Univ., 2.The Wakasa Wan Energy Research Center)

P022 Breeding of an early maturing and indeterminant soybean line for late and narrow-row dense-planting

○Shimamura, S. [1], S. Kato [1], K. Hirata [1], S. Shimada [2], A. Kikuchi [1] (1.Tohoku Agric. Res. Cent., NARO, 2.Central Region Agric. Res. Cent, NARO)

P023 Rearing of transgenic silkworms in sericulture farms

○Komoto, N. [1], M. Tsuda [2], E. Okada [1], T. Iizuka [1], N. Kuwabara [3], H. Ito [3], M. Ikeda [3], H. Sezutsu [1], Y. Tabei [1], S. Tomita [1] (1.Inst. Agrobiol. Sci., NARO, 2.Univ. Tsukuba, 3.Gunma Seric. Technol. Center)

P024 Development of rice line “Shiga 80” and “Shiga 81” introduced rice heading gene and disease resistant gene into “Mizukagami” by marker-assisted selection

○Nishimura, T. [1], S. Shiigi [1], T. Yoshida [1], S. Mori [2], Y. Yamada [3], K. Hino [1], 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)

P025 Influences of the 7th Governing Body Session of the International Treaty on Plant Genetic Resources for Food and Agriculture on plant breeding research

Yamamoto, A., E. Domon, ○R. Machida-Hirano (NARO, NGRC)

P026 Influence of flowering position and day on pod and seed trait in Dainagon Azuki bean

○Sawada, H. [1], Y. Yoshida [2] (1.Grad. Sch. Agr. Sci., Kobe Univ., 2.Food Resources Edu. and Res. Center, Grad. Sch. Agr. Sci., Kobe Univ.)

P027 Soybean candidate lines for maiting parent in South-Western Japan

○Kono, Y. [1], N. Oki [2], M. Takahashi [2], M. Takahashi [3] (1.NARO, CRARC, 2.NARO, KARC, 3.NARO, NICS)

P028 Genetic analyses of non-pungent pepper suggesting relation between loss of pungency and expression level of aminotransferase gene

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

P029 Potential of rice phytochrome mutants in breeding application

○Inagaki, N. (Adv. Anal. Cent., NARO)

P030 Selection of superior line in interspecific hybrids using unused genetic resources of Japanese lawn grass (*Zoysia* genus)

☆Miyachi, T., Y. Matsuda, T. Murata (Grad. Sch. of Agri. Tokai U.)

P031 Phenotypic analysis of semi-dwarf Japanese barnyard millet [*Echinochloa esculenta* (A. Braun) H. Scholz] lines

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

P032 Morphological investigation and heterostylous flower of Japanese mint (*Mentha arvensis*)

○Furukawa, K. [1], M. Tomioka [1], . Kitami Hakka Tsusho Co., Ltd. [2] (1.National Institute of Technology, NUMAZU College, 2.Kitami Hakka Tsusho Co., Ltd.)

P033 Transmission of phenotypic diversity in the wild diploid wheat relative *Aegilops umbellulata* to synthetic allohexaploids

☆Okada, M., K. Yoshida, S. Takumi (Grad. Sch. Agr. Sci., Kobe U.)

P034 Development of a set of DNA markers for the identification of true blast resistance genes in rice

○Nonoue, Y., T. Ishii (NARO, Inst. of Crop Sci.)

P035 Expression QTL analysis of a rice cultivar 'Akinokirameki' using RNA-seq data

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

P036 Whole-genome sequencing approach for rice robust mutant

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

P037 Characterization of an ion-beam induced semi-dwarf mutant *sdb* in tartary buckwheat

☆Nakano, A. [1], J. Aii [1], M. Komori [1], T. Abe [2], T. Morishita [3], T. Suzuki [4], A. Shimizu [5], H. Tanaka [1] (1.NUPALS, 2.RIKEN, Nishina Cent., 3.NARO, HARC, 4.NARO, KARC, 5.NICS, Radiation Breeding Division)

P038 Cultivar identification and molecular phylogenetic tree based on SSR markers in bentgrass

☆Kawano, C. [1], S. Yamada [2], H. Tanaka [1] (1.Fac. Agr., Tottori Univ., 2.Chubu Co., Ltd.)

P039 Cultivar identification of rhizome lotus using SNPs detected by ddRAD-seq analysis

☆Kobayashi, N. [1], K. Shirasawa [2], M. Horii [3], K. Shinohara [4], E. Sawada [4], K. Yashiro [3], Y. Higuchi [5], Y. Ishikawa [5], E. Haque [1], E. Inoue [1], T. Kuboyama [1] (1.Col. Agr. Ibaraki U., 2.Kazusa DNA Res. Inst., 3.Plant Biotech. Inst., Ibaraki Agr. Cent., 4.Tokushima Agr., Fores., and Fish. Tech. Support Cent., 5.Grad. Sch. Agr. Life Sci., U. Tokyo)

P040 Upgrade of new marker technology, GRAS-Di

○Enoki, H., Y. Takeuchi, K. Suzuki (Toyota Motor Corporation)

P041 Fine mapping of *NEKODE1* gene using DNA markers

Nishioka, N. [1], H. Masumoto [1], H. Takagi [2,3], K. Ichitani [4], R. Terauchi [2,5], ○K. Fukunaga [1] (1.Fac. Life and Environ. Sci., Pref. Univ. Hiroshima, 2.Iwate Biotech. Center, 3.Bioresources and Environ. Sci., Ishikawa Pref. Univ., 4.Fac. Agr. Kagoshima.Univ., 5.Grad. School of Agr. Kyoto Univ.)

P042 Genome wide association study for skin color in strawberry fruit using multi-parent advanced generation inter-cross population

○Tsubone, M. [1], T. Wada [1], S. Isobe [2], S. Nagano [2,3], M. Mori [1], C. Hirata [1], S. Nagamatsu [1], K. Shimomura [1], K. Hirashima [1] (1.Fukuoka Agric. Forest. Res. Cent., 2.Kazusa DNA Res. Inst., 3.Forest Tree Breeding Cent., FFPRI)

P043 Development of the near isogenic lines for the loci responding to transformation amenability in barley

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

P044 Molecular mapping of a male sterility gene in a male sterile line obtained from rice cultivar LEBED backcrossed with Taichung 65

Murakami, T., T. Kazama, ○K. Toriyama (Graduate School of Agricultural Science, Tohoku University)

P045 Narrowing of the QTLs on linkage groups 2 and 6 associated with glucoerucin content in radish

○Fukino, N. [1], H. Kitashiba [2], T. Kakizaki [1], M. Ishida [1], T. Nishio [2], E. Itabashi [1], T. Ohara [1] (1.Inst. Veg. Floric. Sci., NARO, 2.Grad. Sch. Agri. Sci., Univ. Tohoku)

P046 QTL mapping for grain cadmium concentration using a wheat doubled haploid population

○Ban, Y. [1], G. Ishikawa [2], H. Ueda [3], K. Kato [1], K. Takata [1], M. Matsuyama [4], T. Nakamura [5], M. Yanaka [1] (1.Western Agri. Res. Cent., NARO, 2.Inst. of Crop Sci., NARO, 3.Grad. Sch. Sci., Hiroshima Univ., 4.Hyogo Pref. Agri. Res. Cent., 5.Tohoku Agri. Res. Cent., NARO)

P047 Effect of seed dormancy-related gene *Qsd2* on pre-harvest sprouting tolerance in two-rowed barley

☆Mori, K. [1], T. Kato [1], M. Shibamura [2], T. Syuu [2], H. Aoki [3], T. Nagamine [3], T. Tanaka [4], S. Fukuoka [4], A. Shomura [4], K. Namai [1] (1.Tochigi Pref. Agric. Exp. Stn., 2.Sapporo Brew. Ltd., 3.CARC/NARO, 4.NICS/NARO)

P048 QTL analysis of salt stress tolerance in Shirasagi-komugi wheat

☆Nakayama, R. [1], A. Tokunaga [1], S. Sakuma [2,3], A. Nagano [4], Y. Ogihara [1], K. Kawaura [1] (1.KIBR, Yokohama City U., 2.Tottori U., 3.IPK, 4.Ryukoku U.)

P049 Detection of QTLs involved in GA-triggered male strobili production and gene expression profiling during male strobili development process in Japanese cedar

○Mishima, K., M. Tsubomura, M. Kurita, T. Hirao, M. Nose, Y. Takashima (Forest Research and Management Organization, Forest Tree Breeding Center)

P050 Detection of loci associated with tip structure of Sorghum trichomes

☆Miwa, Y. [1], M. Shichijo [1], H. Takanashi [1], M. Fujimoto [1], H. Kanegae [1], M. Ishimori [1], K. Yano [2], K. Yamazaki [1], T. Fujiwara [1], J. Yoneda [3], T. Tokunaga [3], F. Ishizuna [1], 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.)

P051 Evaluation of near isogenic lines containing a quantitative trait locus for seedling establishment, *qSES11*, in a rice cultivar 'Hoshimaru' genetic background

○Iwata, N. [1], T. Nishimura [2], Y. Hirayama [2], A. Torada [1] (1.HOKUREN Agric. Res. Inst., 2.HRO/Kamikawa Agri. Exp. Sta.)

P052 Analyses of QTLs and grain traits associated with the plump-grain percentage in two-rowed barley

☆Haraguchi, Y., T. Todoroki, H. Kai (Fukuoka Agric. Forest. Res. Cent.)

P053 Exploring novel QTL for brix in sweet sorghum juice

☆Okamura, S. [1], Y. Niwa [2], S. Nakamura-Araki [3], K. Kawae [2], K. Shinohara-Ohmae [3], K. Miura [4], S. Kasuga [5], T. Sazuka [3] (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Fac. Agr., Nagoya Univ., 3.Biosci. and Biotech. Center, Nagoya Univ., 4.Dept. Biosci. Fukui Pref. Univ., 5.AFC, Fac. of Agri., Shinshu Univ.)

P054 Explore for locus related to morphology and pepper spot which are physiological traits in Chinese cabbage

☆Mori, K. [1], O. Kawaide [3], T. Hukune [1], M. Nakazawa [1], R. Matsuo [2], S. Chino [5], H. 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)

P055 QTL analysis of agricultural phenotypes in Chinese cabbage

☆Fukune, T. [1], O. Kawaide [3], K. Mori [1], M. Nakazawa [1], N. Ito [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 Textile, Shinshu University, 3.TOHOKU SEED CO., LTD., 4.Gene Research Center, Shinshu University, 5.Engineering Department, Faculty of Textile, Shinshu University)

P056 GWAS and QTL analysis on culture response of sorghum immature embryos

☆Nishimura, A. [1], M. Shichijyo [1], Y. Miwa [1], H. Takanashi [1], M. Fujimoto [1], H. Kanegae [1], M. Kobayashi [2], K. Yano [2], T. Koshiba [3], T. Tokunaga [3], H. Iwata [1], W. Sakamoto [4], N. Tsutsumi [1] (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.Sch. Agr. Meiji Univ., 3.EARTHNOTE Co. Ltd., 4.Inst. Plant Sci. Res., Okayama Univ.)

P057 Genome-wide association study for surveying genomic regions controlling tuberous root color in sweetpotato

☆Kimura, T. [1], M. Tanaka [2], K. Shirasawa [3], S. Isobe [3], M. Tahara [1], Y. Monden [1] (1.Grad. Sch. Env. & Life Sci., Okayama Univ., 2.KONARC, 3.Kazusa DNA Res. Inst.)

P058 Effects of a heading-time gene *Hd17* of the rice cultivar “Moritawase” in the rice cultivar “Tsuyahime” genetic background

☆Abe, Y. [1], T. Homma [1], R. Chuba [1], K. Watanabe [1], Y. Ishizuka [1], H. Goto [2], M. Chuba [2], T. Suzuki [3], H. Saito [4], K. Hori [5], T. Yamamoto [5] (1.Rice Breeding and Crop Sci. Exp. Stn. of Yamagata Integrated Agr. Res. Cent., 2.Yamagata Integrated Agr. Res. Cent., 3.Osaka Office of Yamagata Prefectural Government, 4.Yamagata Prefectural College of Agriculture and Forestry, 5.Institute of Crop Science NARO)

P059 Estimation of founder haplotypes by combining multiple algorithms: application to apple data

☆Minamikawa, M. [1], M. Kunihisa [2], K. Noshita [1], S. Moriya [2], K. Abe [2], T. Hayashi [3], Y. Katayose [3], T. Yamamoto [2], H. Iwata [1] (1.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 2.NIFTS, NARO, 3.NICS, NARO)

P060 Comparison of mutations on whole-genome by mutagenesis breeding techniques in rice

☆Tsuda, M. [1], T. Ito [2], M. Oshima [1], M. Endo [3], Y. Tabei [3], R. Ohsawa [1], N. Nishimura [4] (1.T-PIRC, Univ. Tsukuba, 2.Advanced Analysis Center, NARO, 3.Institute of Agrobiological Sciences, NARO, 4.Institute of Crop Science, NARO)

P061 Phenotype evaluation of G protein γ5 subunit in rice

☆Chaya, G., A. Nishiyama, S. Matsuta, T. Itoh, K. Miura, Y. Iwasaki (Dept. Biosci., Fukui Pref. Univ.)

P062 Identification of heterotrimeric G protein γ3 subunit in rice

☆Nishiyama, A., S. Matsuta, G. Chaya, T. Itoh, K. Miura, Y. Iwasaki (Dept. Biosci., Fukui Pref. Univ.)

P063 Identification of heterotrimeric G protein γ4 subunit in rice

☆Matsuta, S., A. Nishiyama, G. Chaya, T. Itoh, K. Miura, Y. Iwasaki (Dept. Biosci., Fukui Pref. Univ.)

P064 Expression and functional analysis of soybean *Ln* gene in carpel development

○Komatsu, K. [1], R. Franks [2], M. Saruta [1], Y. Takada [1], K. Yamashita [1], T. Sayama [1] (1.NARO, Western Agricultural Research Center, 2.North Carolina State Univ.)

P065 Effect of the novel *Vrn-A3* allele in a spelt wheat (*Triticum aestivum* L. ssp. *spelta*) accession, KT19-1 on earliness of wheat

☆Nishimura, K. [1], T. Saito [1], H. Handa [2], N. Mori [3], K. Kawaura [4], A. Kitajima [1], T. Nakazaki [1] (1.Grad. Sch. Agr., Kyoto Univ., 2.NICS, 3.Grad. Sch. Agr. Sci., Kobe Univ., 4.KIBR, YCU)

P066 Generation of knockout rice lines of endoplasmic reticulum stress response-related genes

○Wakasa, Y., S. Hayashi, M. Endo, M. Mikami, T. Kawakatsu (NARO)

P067 Application of Target-AID technology for producing long shelf life tomatoes

☆Komatsu, H. [1], M. Takayama [2], T. Ariizumi [2], K. Nishida [3], A. Kondo [3], H. Ezura [2] (1.Grad. Sch. Life Env. Sci., Univ. Tsukuba, 2.Fac. Life Env. Sci., Univ. Tsukuba, 3.Grad. Sch. Sci. Technol. Innov., Univ. Kobe)

P068 Loss-of Function of SPFF, a Novel Tomato Receptor-like Kinase, Induces Parthenocarpic Fruit Set

☆Takei, H. [1], T. Shinozaki [1], R. Yano [1], M. Hernould [2], C. Chevalier [2], H. Ezura [1], T. Ariizumi [1] (1.Univ. Tsukuba, 2.INRA)

P069 Impairment of Lhca4, a subunit of LHCI, causes high accumulation of chlorophyll in rice

☆Yamatani, H. [1], K. Kohzuma [1], M. Nakano [1], T. Takami [2], Y. Kato [2], A. Tanaka [3], W. Sakamoto [2], W. Kusaba [1] (1.Grad. Sch. Sci., Hiroshima Univ, 2.Inst. Plant Sci. Res., Okayama Univ, 3.Inst. Low Temp. Sci, Hokkaido Univ)

P070 An approach toward developing transformation system in rice mitochondria using suspension cells

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

P071 Properties of the transplastomic tobacco plants that have merodiploid chloroplast genomes

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

P072 Characterization of novel DNA molecule containing the mitochondrial DNA homologous sequence in sugar beet

☆Kitazaki, K., S. Tazoe, T. Murata, K. Ito, M. Ohkubo, R. Kurino, T. Kubo (Res. Fac. Agriculture Hokkaido Univ.)

P073 Construction of full-length cDNA sequence using Iso-Seq method and exploitation of novel genes 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)

P074 Comparative genome and transcriptome analyses among Koshihikari and its related cultivars

○Kawahara, Y. (Institute of Crop Science, National Agriculture and Food Research Organization (NARO))

P075 Variations in polyphenol contents in rhizome of fifty four varieties of ornamental Lotus

☆Haque, E. [1], Y. Higuchi [2], Y. Ishikawa [2], M. Horii [3], K. Yashiro [3], E. Inoue [1], T. Kuboyama [1] (1.Col. Agr. Ibaraki U., 2.Grad. Sch. Agr. Life Sci., U. Tokyo, 3.Plant Biotech. Inst., Ibaraki Agr. Cent.)

P076 Drought stress response of seed ionomic traits in a soybean germplasm collection

☆Yamaoka, S. [1], A. Kaga [2], T. Kamiya [1], T. Fujiwara [1], H. Iwata [1] (1.Grad. Sch. Agr. Life Sci., U. Tokyo, 2.NICS)

P077 Acquisition of individual phenotype of rice plant utilizing UAV

☆Kondo, T. [1], R. Kikkawa [2], K. Doi [1], S. Nishiuchi [1,3] (1.Grad. Sch. Bioagr. Sci, Nagoya U., 2.Fac. Agr, Nagoya U., 3.JST PRESTO)

P078 Connectivity between crop traits within Japan and existing trait ontologies

○Horyu, D., T. Hayashi (Inst. Crop Sci., NARO)

P079 Evaluation of field resistance against *Calonectria ilicicola* in soybean

○Hishinuma, A., S. Shimamura, K. Hirata, A. Kikuchi (Tohoku Agr. Res. Center, NARO)

P080 Comparison between degree of infection and serological diagnosis by ELISA for specific detection of two soil-borne viruses in barley

○Aoki, E., Y. Fujita, T. Yanagisawa (NICS/NARO)

P081 Breeding approach to purple seed stain resistance in soybean

○Hirata, K. [1], S. Shimamura [1], A. Hishinuma [1], F. Taguchi-Shiobara [2], Y. Yokota [2], A. Kikuchi [1] (1.Tohoku Agricultural Research Center, NARO, 2.Institute of Crop Science, NARO)

P082 Evaluation of major Japanese cultivars for resistance to bacterial grain rot caused by Burkholderia glumae, and selection of standard cultivars in rice

○Mizobuchi, R. [1], S. Fukuoka [1], C. Tsuiki [1], S. Tsushima [2], H. Sato [1] (1.NARO, 2.Tokyo University of Agriculture)

P083 Functional analysis of Crr1a, a gene for resistance to clubroot disease (Plasmodiophora brassicae Woronin) in Brassica rapa L.

☆Yuzawa, S., Y. Takahata, K. Hatakeyama (Sch. Agr., Univ. Iwate)

P084 Analysis of the rice bacterial blight resistance gene NRKc2

○Aoki, H. (NARO Agricultural Research Center)

P085 Overexpression of *BSR1* confers resistance against smut disease without undesirable morphological effects in sugarcane

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

P086 Accumulation of several genes for brown planthopper resistance of rice new variety "Akiharuka"

☆Nakanishi, A., T. Kataoka, K. Tamura, Y. Takeuchi (NARO/KARC)

P087 Development of near-isogenic and pyramided lines carrying resistance genes to brown planthopper with the genetic background of japonica rice variety

☆Nguyen, D. [1], T. Okano [2], M. Matsumura [3], H. Yasui [4], D. Fujita [2] (1.The United Graduate School of Agricultural Sciences, Kagoshima University, 2.Faculty of Agriculture, Saga University, 3.Kyushu Okinawa Agricultural Research Center, NARO, 4.Faculty of Agriculture, Graduate School, Kyushu University)

P088 Assessment of salt tolerance and analysis of salt tolerance gene for Indonesian soybean germplasm

Cao, D., Y. Yan, ○D. Xu (Japan International Research Center for Agricultural Sciences)

P089 Genome-wide Investigation of NAC transcription factor involved in abiotic stress responses in pearl millet

☆Dudhate, A. [1,2], H. Shinde [1,2], D. Tsugama [3], S. Liu [4], 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.Hokkaido University, 4.Northeast Forestry, Univ. China)

P090 Gene pyramiding approach using a cadmium-tolerant *argonaute1* mutant of *Arabidopsis*

○Watanabe, A. [1], H. Iimura [1], S. Nakamura [1], S. Kumagai [2], K. Ueda [1], K. Sakurai [1], H. Takahashi [1], H. Akagi [1] (1.Fac. Bioresource Sci., Akita Prefectural Univ., 2.Grad. Sch. Bioresource Sci., Akita Prefectural Univ.)

P091 Screening MSD lines for tolerance to phosphorus deficiency

☆Yamasaki, Y. [1], Y. Gorafi [1], I. Tahir [2], H. Tsujimoto [1] (1.Arid Land Research Center, Tottori University, 2.Agricultural Research Corporation, Sudan)

P092 Improvement of DNA marker diagnostic for potato genetic resources with candidate resistance locus, *Gpa6*, to white potato cyst nematode

○Shimosaka, E., K. Asano, K. Akai, S. Tamiya (Hokkaido Agri. Res. Cent., NARO)

P093 A QTL for reduced height on the short arm of chromosome 2D detected from spelt wheat

☆Kainuma, K. [1], M. Nakajima [1], Y. Sakai [1], A. Torada [2], H. Miura [1], K. Onishi [1] (1.Obihiro Univ. Agr. & Vet. Med., 2.HOKUREN Agric. Res. Inst.)

P094 QTL analysis for temporal alteration of leaf chlorophyl content during maturity stage in rice

☆Phung, D. [1], H. Sunohara [2], S. Nishiuchi [1,3], M. Kondo [1], K. Doi [1] (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Biosci. Biotechnol. Ctr., Nagoya U., 3.JST PRESTO)

P095 Screening of QTLs for grain length using extra-large grain rice

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

P096 Genotypic difference in the environmental response of grain weight distribution in Japanese rice cultivars

☆Yabe, S. [1,2], H. Yoshida [3], E. Fushimi [3], M. Yamasaki [4], T. Hayashi [1], H. Nakagawa [3] (1.NARO Institute of Crop Science, 2.JST PRESTO, 3.NARO Institute for Agro-Environmental Sciences, 4.Food Resources Education and Research Ctr., Grad. Sch. Agric. Sci., Kobe Univ.)

P097 Resilience effects to wheat growth with seed treatment of KODA/Duckweed fertilizer (DWF) under a nutrition deficiency field condition

☆Nagamine, A. [1], H. Emdadul [1], S. Ogawa [2], K. Takagi [2], T. Ban [1] (1.Kihara Inst., YCU, 2.Shiseido Co., Ltd.)

P098 Comparison of quality characteristics of a common wheat line lacking puroindolines and D genome-coded glutenin subunit proteins with a durum wheat cultivar

○Takata, K. [1], T. Ikeda [1], M. Yanaka [1], Y. Ban [1], K. Kato [1], H. Okusu [2], T. Tanaka [2] (1.WARC/NARO, 2.Nippon Flour Mills Co., Ltd.)

P099 Selection of Rice standard varieties for evaluating Grain Quality under High Temperature, employed in the Examination of Applied Variety of MAFF

○Sato, H., T. Ishii, H. Ohta, H. Maeda, O. Ideta, Y. Takeuchi, R. Kaji, I. Nagaoka, H. Hirabayashi, A. Shigemune, K. Tamura (National Aguriculture and Food Research Organization, NARO)

P100 Effect of a *Hordoindoline* gene on the hardness index of barley lines with different β-glucan content

○Takahashi, A., T. Yoshioka (WARC/NARO)

P101 Analysis of a high β-glucan barley mutant line, Tanikei QM-1

☆Nakata, M. [1], T. Ikeda [2], Y. Ichinose [3], M. Seki [1], H. Aoki [1], T. Kato [4], K. Komae [5], T. Nagamine [1] (1.CARC, NARO, 2.WARC, NARO, 3.NICS, NARO, 4.Tochigi Pref. Agric. Exp. Stn., 5.KONAN WOMEN'S UNIV.)

P102 A buckwheat glutathione S-transferase gene that related to anthocyanin accumulation

○Matsui, K. [1], T. Tomatsu [1,2], S. Kinouchi [1,2], T. Sato [2] (1.NARO Institute of Crop Science, 2.Department of Bioengineering, Nagaoka University of Technology)

P103 The research of fluctuation of barley grain quality in field: Estimation of beta-glucan content and glassy grain rate using Near-infrared spectrometer

○Yanagisawa, T. [1], T. Nagamine [2], M. Oyama [3], T. Kato [3], T. Sekiwa [3], R. Masuda [1], E. Aoki [1] (1.NICS/NARO, 2.CARC/NARO, 3.Tochigi Pre. Agr. Exp. Stn.)

P104 Varietal differences of chrolophyll content in rapeseed

○Kawasaki, M. [1,2], K. Hatakeyama [2], Y. Takahata [2] (1.Tohoku Agricultural Research Center, NARO, 2.Fac. Agri., Iwate University)

P105 Fine mapping and candidate gene analysis of the photoperiod response gene FD1 in adzuki bean

☆Imoto, Y. [1], Y. Horiuchi [2], H. Yamamoto [1], H. Wada [1], S. Yoshikawa [1], Y. Tokuji [1], H. Sato [2], K. Kato [1] (1.Obihiro Univ. Agr. & Vet. Med., 2.Tokachi Agr. Exp. Sta., HRO)

P106 Visualization of stem vascular networks using micro-CT scanning in maize

Maeno, A. [2], ○K. Tsuda [1] (1.National Institute of Genetics, Experimental Farm, 2.National Institute of Genetics, Mammalian Genetics Laboratory)

P107 Morphological characterization of spikelet and microarray analysis of the Large grain mutant found in transposon-tagged lines in rice (*Oryza sativa* L.)

☆Chiou, W. [1,2], T. Kawamoto [3], K. Rikiishi [2], E. Himi [2], H. Nishimura [2], K. Tsugane [4], M. Maekawa [2] (1.Grad. Sch. Environ. Life Sci., Okayama Univ., 2.IPSR, Okayama Univ., 3.Radioisotope Res. Inst., Sch. Dental Medicine, Tsurumi Univ., 4.NIBB)

P108 Identification of genes promoting stem cell formation under SHOOTLESS/SHOOT ORGANIZATION pathway in rice

○Nosaka-Takahashi, M. [1], T. Suzuki [1], S. Shimizu-Sato [1], N. Ta [1], H. Takahashi [2], T. Suzuki [3], A. Toyoda [1], M. Nakazono [2], Y. Sato [1] (1.National Institute of Genetics, 2.Grad. Sch. Bioagricultural Sci., Nagoya Univ., 3.Grad. Sch. Biosci. Biotech., Chubu Univ.)

P109 Mitochondrial morphological change dring leaf development and senescence in Arabidopsis thaliana

☆Sugaya, H., A. Yamashita, F. Ishizuna, N. Tsutsumi, S. Arimura (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

P110 Selection and genetic analysis of non-shattering mutants using near-isogenic lines in *japonica* rice variety *Nipponbare* background

Yano, S., K. Sasabe, ☆S. Konishi-Sugita (Faculty of Agriculture, Kagawa University)

P111 Differences of parthenogenetic protocorm induction rates among *Cymbidium* cultivars with a genome of *Cym. floribundum* treated by auxin on stigma

Mise, F., K. Sawada, A. Nakano, M. Kameyama, ○J. Kato (Fac. Educ, Aichi U. Educ.)

P112 Improvement of longevity in rice seeds by short-term priming

☆Kondo, D. [1], N. Sano [2], k. Murata [3], T. Yamada [1], M. Kanekatsu [1] (1.Grd. Sch. Agr., Tokyo U. Agr. Tec., 2.INRA. IJPB. France, 3.Toyama Pref. Agr. Forest. Fish. Res. Cent.)

P113 Growth characters of early-type “Yukichikara” developed by recurrent backcrossing with early-type synthetic hexaploid wheat as a non-recurrent parent

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

P114 Analysis of genetic factor for long-juvenile trait under short photoperiod in soybean

☆Yokota, Y. [1], T. Yamada [1], T. Sayama [1,2], A. Kaga [1], E. Ogiso-Tanaka [1], M. Ishimoto [1] (1.Institute of Crop Science, NARO, 2.Western Region Agricultural Research Center, NARO)

P115 Identification of late-flowering revertant, *late-heading 1*, in the early-flowering einkorn wheat mutant

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

P116 LncRNA BrFLC2as in Brassica rapa differs from Arabidopsis thaliana COOLAIR

Shea, D. [2], S. Takada [1], N. Nishida [1], E. Itabashi [3], M. Shimizu [4], K. Okazaki [2], ○R. Fujimoto [1] (1.Grad. Sch. Agric. Sci., Kobe Univ, 2.Grad. Sch. Sci. Tech., Niigata Univ, 3.Inst. Veget. Floricul. Sci., NARO, 4.Iwate Biotech. Res. Ctr.)

P117 Phenotypic plasticity of barley growth process based on leaf blade elongation

○Saisho, D. [1], J. Ito [2], H. Tsuji [2], T. Hirayama [1] (1.IPSR, Okayama U., 2.KIBR, Yokohama City Univ.)

P118 Transcriptome analysis of a wild rice introgression line in response to potassium deficiency

☆Ohmori, Y., T. Fujiwara (Dept. of Appl. Biol. Chem., Grad. Sch. of Agric. Life Sci., Univ. of Tokyo)

P119 Cultivar differences in dependence on nitrogen fixation of soybeans in a field

○Umehara, Y. [1], M. Hayashi [2], A. Kaga [3], F. Tanaka [2], Y. Ohwaki [2], I. Masao [3], H. Makoto [4] (1.NIAS/NARO, 2.CARC/NARO, 3.NICS/NARO, 4.CSRS/RIKEN)

P120 Mapping of QTLs for anther length in rice using BC $_3$F $_2$ population

☆Mujadidi, M. [1,3], T. Kokubun [1], K. Shirasawa [2], E. Haque [1], T. Kuboyama [1] (1.Col. Agr., Ibaraki U., 2.Kazusa DNA Res. Inst., 3.Fac. Agri., Kandahar U.)

P121 Constructing a contig of *HWA1*, one of causal genes of a hybrid weakness in rice, using PacBio-sequencer reads

○Kuboyama, T. [1], K. Ichitani [2] (1.Col. Agr. Ibaraki U., 2.Fac. Agr., Kagoshima U.)

P122 Linkage analysis and dosage effect of *HWA1* and *HWA2*, genes causing a hybrid weakness phenomenon in rice

☆Toyomoto, D. [1], S. Taura [2], T. Kuboyama [3], K. Ichitani [1,4] (1.United Grad. Sch. Agri. Sci., Kagoshima Univ., 2.Inst. Gene Res., Kagoshima Univ., 3.Fac. Agri., Ibaraki Univ., 4.Fac. Agri., Kagoshima Univ.)

P123 A novel pair of complementary hybrid weakness genes of rice identified in the cross between T65 and Lijiangxintuanheigu

☆Kunieda, M. [1], R. Suzuki [2], M. Tasaki [1], S. Nishiuchi [1,3], K. Doi [1], H. Sunohara [4] (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.Fac. Agr., Nagoya U., 3.JST PRESTO, 4.Biosci. Biotechnol. Ctr., Nagoya U.)

P124 Growth dynamics of callus derived from different microspores in F $_1$ anther culture of rice

Ito, T., ○Y. Okamoto, T. Wagatsuma (Univ. Rakuno Gakuen)

P125 Effects of culture medium, bud stage, and genotype on unfertilized ovule culture in *Gentiana* spp.

☆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)

P126 Expression analysis of the unilateral incompatibility gene at the pollen side, *PUI1*, in *Brassica rapa*

☆Sato, Y. [1], Y. Takada [1], M. Osaka [1,2], S. Takayama [3], G. Suzuki [4], M. Watanabe [1] (1.Grad. Sch. Life Sci., Tohoku Univ., 2.Miyagi Prefect. Agric. & Horti. Res. Cent., 3.Grad. Sch. Agiric. Life Sci., Tokyo Univ., 4.Div. Natl. Sci., Osaka Kyoiku Univ.)

P127 Molecular analysis of the *S-locus* in buckwheat

☆Akiyama, S. [1], J. Aii [1], S. Sato [1], A. Tamaki [1], A. Nakano [1], Y. Yasui [2], M. Mori [3], T. Ota [4], H. Tanaka [1] (1.NUPALS, 2.Grad. Sch. Agr., Kyoto Univ, 3.Res. Inst. Bioresour. Biotech., Ishikawa Pref. Univ, 4.Dep. Evol. Stud. Biosys., Grad. Univ)

P128 Molecular genetic analysis of cytoplasmic male sterile line and fertility restorer line derived from Oryza rufipogon, W1112

Komatsu, C., R. Shida, E. Hajime, K. Toriyama, ○T. Kazama (Grad. Sch. Agri. Sci., Tohoku Uni.)

P129 Genetic network of bHLH transcription factors regulating meiotic siRNA biogenesis in rice anther tapetum

☆Ono, S. [1], K. Tanaka [2], T. Sasaki [3], K. Nonomura [1,4] (1.Exp. Farm, Natl. Inst. Genet.l, 2.NODAI Genome Res. Ctr., Tokyo Univ. Agr., 3.NODAI Res. Inst., Tokyo Univ. Agr.D, 4.Dep. Life Sci., Grad. U. Adv. Study/SOKENDAI)

P130 Linkage analysis of genes causing hybrid breakdown in the progeny from the cross between the two rice cultivars, Surjamukhi and Kissin

☆Ikemoto, Y. [1], D. Toyomoto [2], M. Uemura [1], R. Hoki [1], S. Taura [3], K. Ichitani [1] (1.Fac. Agr., Kagoshima Univ., 2.United Grad. Sch. Agri. Sci., Kagoshima Univ., 3.Inst. Gene Res., Kagoshima Univ.)
