Title of Papers Presented at the 137th Meeting of The JAPANESE SOCIETY OF BREEDING

Oral Presentations

101 The 3D genome structure of monosomic alien addition lines in rice

☆Hosaka, A. [1], A. Mayumi [1], H. Suzuki [2], M. Kasahara [2], K. Nonomura [3], H. Yasui [4], H. Tsuji [1] (1.KIBR., Yokohama City University, 2.Grad. Sch. Frontier Sci., Univ. Tokyo, 3.Experimental Farm., National Institute of Genetics, 4.Grad. Sch. Agric., Kyushu Univ)

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102 Genomic prediction with genotype × environement interaction models in sorghum

☆Ishimori, M. [1], K. Yamazaki [1], H. Takanashi [1], H. Kajiya-Kanegae [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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103 New effective methods of DNA polymorphism detection from NGS data and contamination detection of rice seeds

○Miyao, A. [1], J. Kiyomiya [1], K. IIda [1], K. Doi [2], H. Yasue [2] (1.Inst. Crop. Sci., NARO, 2.Tsukuba GeneTech. Lab. Inc.)

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104 Characterization of QTLs for vascular bundle number at the panicle neck under two differrent genetic background

☆Nguyen, T., S. Suetsugu, Y. Nakamura, Z. Demeter, S. Zheng, D. Fujita (Fac. Agr., Saga Univ.)

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105 Linkage map construction and *de novo* whole genome sequencing in Eustoma grandhiflorum

Shirasawa, K. [1], R. Arimoto [2], M. Ishimori [3], M. Miyasaka [4], A. Ghelfi [1], H. Hirakawa [1], M. Endo [2], S. Kawabata [2], ○S. Isobe [1] (1.Kazusa DNA Res. Inst., 2.Takii Co., Ltd., 3.Grad. Sch. Agri. Life Sci. Univ. Tokyo, 4.Nagano Vegetable and Ornamental Crops Exp. St.)

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106 Long-read assembly and resequencing analysis of bitter gourd genome

○Matsumura, H. [1], M. Hsiao [2], A. Toyoda [3], K. Tarora [4], N. Taniai [4], N. Miyagi [4], N. Urasaki [4], S. Anand [5], N. Dhillon [5], R. Schafleitner [5], C. Lee [5] (1.Gene Res. Ctr., Shinshu Univ., 2.Taiwan Univ., 3.Natl. Inst. Genet., 4.Okinawa Agri. Res. Ctr., 5.World Vegetable Ctr.)

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107 Comparative analysis of organella genome structures in interspecific hybrid tomato lines generated by asymmetric cell fusion

○Shirasawa, K. [1], K. Kuwabara [2], I. Harada [2], H. Takei [2], Y. Iki [2], S. Vann [2], Y. Matsuzawa [3], S. Iioka [3], T. Ariizumi [2] (1.Kazusa DNA Res. Inst., 2.U. Tsukuba, 3.Tokita Seed)

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108 Development of an open-sourced mutation typing procedure and proof-of-concept study in rice

☆Ichida, H., T. Abe (RIKEN Nishina Center)

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109 QTL analysis of soybean seed weight using two RIL populations derived from the reciprocal mating

○Sayama, T. [1], T. Yamada [2], K. Takahashi [2], M. Ishimoto [2], K. Komatsu [1], Y. Takada [1] (1.WARC/NARO, 2.NICS)

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110 QTL analysis of salt stress tolarance of coastal green foxtail *Setaria viridis* var. *pachystachys*, a wild relative of foxtail millet *S. italica*

Tanaka, T. [1], N. Yamamoto [1], K. Fukunaga [2], ○T. Ohsako [3] (1.Fac. Life Environ. Sci., Kyoto Pref. Univ., 2.Fac. Life Environ. Sci., Pref. Univ. Hiroshima, 3.Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.)

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111 Relationship between QTL for grain yield components and GNI-A1 gene in the DH lines derived from wheat cultivars "Kitahonami" and "Yumechikara"

☆Tanaka, K. [1], K. Kawaguchi [2], Y. Terasawa [2], M. Ito [3], K. Hatta [2], G. Ishikawa [4], Z. Nishio [1] (1.Grad. Sch. Agr., Tokyo Univ. Agr., 2.HARC/NARO, 3.WARC/NARO, 4.NICS/NARO)

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112 Genome-wide characterization of DNA polymorphisms in an adzuki bean cultivar Murasaki-sayaka

○Nagaoka, H. [1,2], T. Yoshida [1], M. Mori [1], K. Kato [1] (1.Obihiro Univ. Agr. & Vet. Med., 2.Biotech Co., Ltd.)

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113 Identification of the genetic loci associated with pre-harvest sprouting and self-compatibility using AmpliSeq technology in common buckwheat

☆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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114 A genetic study of seed production related phenotypes in *Lotus japonicus*

☆Sakurai, M., M. Morita, K. Okazaki, E. Fukai (Niigata University)

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115 Substituition mapping of a gene controlling tiller number from Oryza meridionalis Ng

☆Munguambe, N. [1], S. Inoue [1], Z. Demeter [1], S. Zheng [1], Y. Yamagata [2], D. Fujita [1] (1.Fac. Agr., Saga Univ., 2.Grad. Sch. Fac. Agr., Kyushu Univ.)

---

116 Genome information database toward utilization of Arican rice for genomic breeding

☆Furuta, T. [1], M. Ashikari [2], Y. Sato [3], T. Yamamoto [1] (1.Institute of Plant Science and Resources, Okayama University, 2.Bioscience and Biotechnology Center, Nagoya University, 3.National Institute of Genetics)

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117 Genetic analysis of edible pod characters in pea

☆Sasaki, S. [1], K. Shirasawa [2], K. Tonosaki [1], Y. Takahata [1], K. Hatakeyama [1] (1.Fac. Agri., Iwate Univ., 2.Kazusa DNA Res. Inst.)

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118 Genome analyses of a Triticum aestivum cv. ‘Kitahonami’ mutant revealed the causal genome region of preharvest sprouting tolerance

☆Komura, S. [1], H. Jinno [2], T. Sonoda [2], S. Takumi [3], F. Kobayashi [4], K. Yoshida [3] (1.Fac. Agri., Kobe U., 2.Kitami Agri. Exp. Stn., HRO, 3.Grad. Sch. Agri. Sci., Kobe U., 4.NICS, NARO)

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119 Analysis of the barley grain size genes with recombinant inbred lines (RILs)

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

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120 Cultivation characteristics of a strain bred by newly introducing early maturity gene to 4 genes pyramided variety “Iwate117”

○Nakajo, S. [1], Y. Yoshitsu [1], T. Fujioka [1], T. Kodate [1], T. Saito [1,2], Y. Ota [1,3], A. Abe [4] (1.Iwate Agric. Res. Ctr., 2.Iwate Prefectural Office, 3.Southern Development Bureau of Iwate, 4.Iwate Biotechnol. Res. Ctr.)

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

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

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201 Evaluation of GFP-expressing viral vector for breeding barley cultivars resistant to barley yellow mosaic virus

☆Tanokami, M. [1], W. Wang [2], Y. Tamura [1], S. Kobayashi [1], Y. Nakazawa [1], H. Nishigawa [2] (1.Tochigi Prefectural Agricultural Experiment Station, 2.Utsunomiya University)

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202 A new statistical model for integrating phenotypic networks with multi-trait genome-wide association studies

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

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203 Cancelled

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204 Development of a method for estimating the heading date of field paddy rice using UAV and deep learning

☆Kato, Y. [1], S. Nishiuchi [2,3] (1.Sch. Agr., Univ. Nagoya, 2.Grad. Sch. Sci., Univ. Nagoya, 3.PRESTO, JST)

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205 Acquisition of individual phenotype of Chinese cabbage plant utilizing UAV

☆Kobayashi, N. [1], S. Nishiuchi [2,3] (1.Sch. Agr., Univ. Nagoya, 2.Grad. Sch. Bioagr. Sci., Univ. Nagoya, 3.PRESTO, JST)

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206 Prediction of a Longitudinal Plant TraitBased on Marker Genotype and Environmental Data: An Application to Soybean Canopy Area Measured By UAV Remote Sensing

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

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

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207 Cancelled

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208 Multispectral evaluation of seed phenotypes in wheat and barley

○Ikeda, T. [1], K. Nakamura [2], M. Ito [1] (1.Western Reg. Agr. Res. Ctr., NARO, 2.Kyushu Okinawa Agr. Res. Ctr., NARO)

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209 Development of un-ripe rice rate estimation methods using ride grain image

☆Inoue, S. [1], S. Nishiuchi [2,3] (1.Sch. Agr., Univ. Nagoya, 2.Grad. Sch. Bioagr. Sci., Univ. Nagoya, 3.PRESTO, JST)

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210 Accelerating soybean breeding in a CO_2-supplemented growth chamber

☆Nagatoshi, Y. [1], Y. Fujita [1] (1.Biol. Resources Post-harvest Div., JIRCAS, 2.Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

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211 High-speed development of high gamma-oryzanol content rice lines by sBBS

○Tanaka, J. [1,2], E. Araki [1] (1.NICS, 2.Grad. Sch. of Lif. Env. Sci., Univ. Tsukuba)

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212 Raphanus sativus Genome DataBase

○Hirakawa, H. [1], K. Shirasawa [1], E. Itabashi [2], N. Fukino [2], H. Kitashiba [3] (1.Kazusa DNA Res. Inst., 2.NARO, 3.Grad. Sch. Agri. Sci., Tohoku Univ.)

---

213 The effects of prohydrojasmon on gene expression in rice spikelets during grain ripening under high-temperature

○Morino, K. [1], M. Chiba [2], K. Umemura [3] (1.NARO Central Region Agric. Res. Cent., 2.NARO Western Region Agric. Res. Cent., 3.MeijiSeika Pharma Co., Ltd. Agric. & Vet. Res. Lab.)

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214 Analysis of environmental responsiveness of paddy rice found from cultivation records

○Nishiuchi, S. [1,3], H. Matsui [2,3] (1.Grad. Sch. Bioagr. Sci., Univ. Nagoya, 2.Fac. Data Sci., Univ. Shiga, 3.PRESTO, JST)

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215 Constructing database of Japanese local crop varieties. Part 1. With a focus on the varieties of Okinawa, Kyusyu, Chugoku, and Shikoku districts

○Egashira, H. [1], F. Yamasaki [2], M. Takeya [3] (1.Fac. Agr. Yamagata Univ., 2.Genetic Resources Center, NARO, 3.Research Center for Agricultural Information Technology, NARO)

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216 Expansion of cross search system of genetic resources (PGR-Gateway) by data collaboration of public agricultural research institute

○Takeya, M. [1], F. Yamasaki [2], H. Yoneda [3], T. Sano [3] (1.Research Center for Agricultural Information Technology, NARO, 2.Genetic Resources Center, NARO, 3.Nara Prefecture Agricultural Research and Development Center)

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217 Multi-spectrum image analysis and seasonal QTL dynamics in F_1 population of *Phedimus*, roof greening plant

☆Koji, T. [1,2], Y. Yamasaki [3], H. Iwata [4], G. Sasaki [4], M. Ishimori [4], H. Takanashi [4], H. Tsujimoto [3] (1.The United Graduate School of Agricultural Sciences, Tottori University, 2.Fujita Co., Ltd., 3.Arid Land Research Center, Tottori University, 4.Tokyo University)

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218 A consideration from quantitative genetics perspective on utilization of traits arising from novel phenotyping technologies in crop breeding

○Onogi, A. [1,2] (1.ICS, NARO, 2.RCAIT, NARO)

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219 Genomic prediction using historical data of the breeding lines in rice

○Matsushita, K. [1,2], A. Onogi [1,2], H. Kanegae [1], M. Yano [1], A. Goto [2], D. Kim [2], H. Maeda [2], T. Ishii [3], J. Yonemaru [1,2] (1.RCAIT/NARO, 2.NICS/NARO, 3.TARC/NARO)

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220 breedingSimulatR: An R package to simulate breeding schemes

☆Diot, J., H. Iwata (The University of Tokyo, Graduate School of Agricultural and Life Sciences)

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221 A deep learning-based phenotypic analysis for root distribution in rice varieties

☆Teramoto, S., Y. Uga (Inst. Crop. Sci., NARO)

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222 Quantification of lignin distribution in a stem section in soybean and its genetic analysis

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

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301 Genetic features of the subgenus *Protocamellia* in Vietnam revealed by population analysis using SSR markers

☆Nguyen, T. [1], V. Luong [2], N. Le [1,3], H. Katayama [4], K. Fukuyama [1], C. Uematsu [1] (1.Grad. Sch. Sci., Osaka City Univ., 2.Faculty of Biology, Dalat Univ., 3.Faculty of Agriculture and Forestry, Hoa Lu Univ., 4.Grad. Sch. Agr., Kobe Univ.)

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302 Breeding of New Vegetable Intergeneric hybrid plant Raphanobrassica 'santevert48'

○Serizawa, H. [1], J. Yamato [1], H. Chikano [2], R. Endo [2] (1.Nagano Veg. & Orn. Crops Exp. Stn., 2.Kagome Co., Ltd.)

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303 Development of the new red radish cv. “Saint Rouge” without containing 4-methylthio-3-butenyl glucosinolate for color additives for food

Ishida, M. [1], ○N. Fukino [1], K. Hamasaki [3], T. Yokoyama [3], T. Ohara [2], T. Kakizaki [2], E. Itabashi [2], M. Imai [3], T. Ono [3] (1.Headquarters, NARO, 2.Institute of Vegetable and Floriculture Science, NARO, 3.San-Ei Gen F. F. I. Co., Ltd.)

---

304 A new rice cultivar "Etsunan 300" specialized for cooking

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

---

305 Mutation breeding of Yamadanisiki for stable production in Fukui Prefecture

☆Yamaguchi, K. [1], G. Chaya [1], K. Takagi [2], Y. Iwasaki [1], K. Miura [1] (1.Grad. Sch. Biosci. Fukui Pref. Univ., 2.The Wakasa Wan Energy Research Center)

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306 Variations on the grain density of rice (*Oryza sativa* L.) panicle discovered in *mPing* tag lines

○Horibata, A. (Fac. of Biol.-Oriented Sci. and Tech., Kindai Univ.)

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307 GWAS of morpho-physiological diversity in wheat related-species *Aegilops tauschii*

☆Mahjoob, M. [1,2], G. Yasir [2,3], Y. Yamasaki [3], N. Kamal [2], M. Abdelrahman [3,4], Y. Matsuoka [5], H. Tsujimoto [3] (1.United Graduate School of Agricultural Sciences, Tottori University, 2.Arid Land Research Center, Tottori University, 3.Botany Department, Faculty of Science, Aswan University, Egypt, 4.Botany Department, Faculty of Science, Aswan University, Egypt, 5.Department of Bioscience, Fukui Prefectural University)

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308 Estimation of genetic regions for small-sized fruit in Japanese apricot cultivars

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

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309 Grain size and seed dormancy dimorphism within a spikelet in wild einkorn wheat: segregation in the F_2 populations between wild and domesticated einkorn

Matsushita, S., M. Kubo, ○S. Ohta (Fac. Biosci. Biotech., Fukui Pref. Univ.)

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310 Development of Tomato cv. Micro-Tom BioResources and the Outcomes

☆Shinozaki, Y. [1], N. Ito [1], T. Ariizumi [1], N. Fukuda [1], Y. Kanayama [2], Y. Kubo [3], K. Aoki [4], K. Yano [5], H. Ezura [1] (1.Fac. Life Environ. Sci., Univ. Tsukuba, 2.Grad. Sch. Agri. Sci., Tohoku Univ., 3.Grad. Sch. Envi. Life Sci., Okayama Univ., 4.Grad. Sch. Lif. Envi. Sci., Osaka Pref. Univ., 5.Grad. Sch. Agri., Meiji Univ.)

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311 Genetic studies on Bambuseae species in Japan. XLIII. Recent flowering observed in the genus *Pleioblastus* and characters of F1 plants with *Sasamorpha borealis*

○Muramatsu, M.

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312 Cancelled

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313 An approach toward isolating early-heading mutants from Tana Toraja local aromatic rice ‘Pare Bau’ irradiated with heavy ion-beam

☆Okasa, A. [1], M. Riadi [1], T. Sato [2], K. Toriyama [2], K. Ishii [3], Y. Hayashi [3], T. Abe [3], R. Sjahril [1] (1.Agri. Fac., Hasanuddin Univ., 2.Grad. Sch. Agri. Sci., Tohoku Univ., 3.RIKEN, Nishina Center)

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314 Cancelled

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315 Cancelled

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316 Interspecific Hybrids between Common Buckwheat (*F. esculentum*) and Perennial Buckwheat (*F. cymosum*)

○Sugiyama, M. [1], K. Matsui [2] (1.Shimane Agri. Tech. Center, 2.Inst. Crop Sci., NARO)

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317 GWAS using *O. rufipogon* population identified a leaf derived signal regulating grain size and its role in rice domestication

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

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318 Effect of combination of shoot and root structures on lodging resistance and yield of paddy rice IR64

○Uga, Y. [1], Y. Kitomi [1], M. Okura [2], T. Ookawa [2] (1.NICS, NARO, 2.TUAT)

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319 High-temperature tolerance gene, *Apq1* improves grain appearance of high-yielding genes in rice

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

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320 The trade-off among wheat grain traits through the mutation of a homeobox gene

Rokuhara, N. [1], S. Ohnishi [2], H. Jinno [2], Y. Yamashita [3], H. Tanaka [1], ☆S. Sakuma [1] (1.Faculty of Agriculture, Tottori University, 2.Kitami Agricultural Experiment Station, 3.Central Agricultural Experiment Station)

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321 Identification of the gene involved in appearance quality of brown rice located on the short arm of chromosome 3

Miura, M. [1], K. Sakurai [1], A. Watanabe [1], K. Ueda [1], T. Kawamoto [2], ○H. Akagi [1] (1.Akita Pref. Univ., 2.Akita Pref. Agri. Exp. Sta.)

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322 Heterosis and photosynthetic rate in seedlings of F_1 hybrids derived from the reciprocal crosses between rice cultivars, Nipponbare and Kasalath

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

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401 Establishment of an in vitro fertilization system in wheat

Maryenti, T. [1], N. Kato [2,3], M. Ichikawa [3], ○T. Okamoto [1,2] (1.Dept. Biol. Sci., Tokyo Met. Univ., 2.RIKEN Baton Zone Pro., Plant Breeding Innov. Lab., 3.Japan Tobacco, Plant Innovation Center)

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402 Comparison of germless and viable grains crossed tetraploid wheat with wild tetraploid wheat relative *Aegilops variabilis* revealed by RNA-seq analysis

☆Takamatsu, A. [1], K. Yoshida [1], T. Ikeda [2], S. Takumi [1] (1.Grad. Sch. Agr. Sci., Kobe U., 2.WARC, NARO)

---

403 Production and phenotypic variation in synthetic allohexaploid lines derived from crossing between tetraploid wheat and the M or N genome diploid relative

☆Tanaka, S. [1], K. Yoshida [1], K. Nagaki [2], T. Ikeda [3], S. Takumi [1] (1.Grad. Sch. Agr. Sci., Kobe U., 2.IPSR, 3.WARC, NARO)

---

404 Phenotypic analysis of hybrid weakness in the cross between *Capsicum annuum* and *C. chinense*

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

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405 Transcriptome analysis of meiotic anthers in the interspecific hybrid in the genus Oryza

○Nonomura, K. [1,2], S. Ono [1], X. Sun [3], K. Tanaka [4], T. Sasaki [5], J. Sese [6] (1.NIG, 2.SOKENDAI, 3.NARO, 4.NGRC, Tokyo Univ. Agr., 5.Res. Inst., Tokyo Univ. Agr., 6.AIST)

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406 Comparison of the imprintome between cultivated rice and wild rice

○Tonosaki, K. [1,2,6], A. Ono [2], H. Nagata [2], H. Furuumi [3], K. Nonomura [4], T. Kawakatsu [5], Y. Sato [3], L. Comai [6], T. Kinoshita [2] (1.Fac. Agri., Iwate Univ., 2.Kihara Inst. Biol. Res., Yokohama City Univ., 3.Plant Genet., Natl. Inst. Genet., 4.Plant Cytogenetics, Natl. Inst. Genet., 5.NIAS, 6.UC Davis)

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407 Analysis of *S* haplotypes of self-compatible *Brassica juncea* 'C451' accession

○Kitashiba, H., R. Kohata, S. Ito, H. Kanezawa, M. Yamamoto (Grad. Sch. Agri. Sci., Tohoku Univ.)

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408 In planta analysis of transgenic Arabidopsis with mutated BrSRK-9 and BrSCR-9 genes based on the BrSRK9-BrSCR9 protein complex structure

○Yamamoto, M., H. Kitashiba (Graduate School of Agricultural Science, Tohoku University)

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409 Appearance of male sterile, and black radishes in a F_2 generation between wild and cultivated *Raphanus*

○Yamagishi, H. [1], A. Hashimoto [2], A. Fukunaga [1], T. Terachi [1] (1.Fac. Life Sci., Univ. Kyoto Sangyo, 2.Plant Organelle Genomics R. C., Univ. Kyoto Sangyo)

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410 Evolution of *restorer-of-fertility* in beet involves gene duplication

Arakawa, T. [1,2], H. Sugaya [1], K. Matsui [1], K. Kitazaki [1], ○T. Kubo [1] (1.Grad. Sch. Agr., Hokkaido Univ., 2.Gifu Res. Inst. Agr. Tech.)

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411 Fine mapping of QTL for male sterility of cultivated strawberry, *qMS4.3*

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

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412 Callose accumulation at onset of meiosis is crucial for normal meiosis progression in Rice

☆Somashekar, H. [1,2], M. Mimura [1], K. Nonomura [1,2] (1.Natl. Inst. Genet., 2.Grad. Univ. Adv. Stds. (SOKENDAI))

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413 Linkage analysis of bacterial blight resistance gene XA20 in XM6, a mutant line from IR24 cultivar

☆Msami, J. [1], K. Ichitani [2], S. Shah [1], Y. Abe [2], Y. Gatayama [2], S. Taura [3] (1.Graduate School of Agriculture, Forestry and Fisheries, Kagoshima University, 2.Faculty of Agriculture, Kagoshima University, 3.Division of Gene Research Kagoshima University)

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414 Cancelled

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415 Variation in the resistance against bacterial blight among different growth stages of rice mutant resistant lines

☆Gatayama, Y. [1], Y. Hagiyama [1], S. Taura [2], K. Ichitani [1] (1.Fac. Agri., Kagoshima Univ., 2.Inst. Gene Res., Kagoshima Univ.)

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416 Elucidation of genetic inheritance of white rust disease resistance and analysis of the genome structure covering white rust resistance gene in *Brassica rapa* L.

☆Miyaji, N. [1], M. Shimizu [2], T. Takasaki-Yasuda [1], I. Chuma [3], R. Fujimoto [1] (1.Grad. Sch. Agric. Sci., Kobe Univ., 2.IBRC, 3.Obihiro Univ. Agric. Vet. Med.)

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417 QTL analysis for brown spot resistance in an American rice variety 'Dawn'

○Ota, Y. [1], K. Matsumoto [1], Y. Nakayama [1], T. Ohno [1], T. Yamakawa [1], R. Mizobuchi [2], H. Sato [3] (1.Mie Pref. Agri. Res. Inst., 2.Inst. Crop Sci., NARO, 3.MAFF)

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418 Detection of QTLs for BPH resistance from Sri Lanka rice landrace Rathu Heenati

☆Nguyen, C. [1], T. Okano [2], S. Sanada-Morimura [3], M. Matsumura [3], S. Zheng [2], H. Yasui [4], D. Fujita [2] (1.United Grad. Sch. Agr. Sci., Kagoshima Univ., 2.Fac. Agr., Saga Univ., 3.Kyushu Okinawa Agr. Res. Ctr., NARO, 4.Grad. Sch. Fac. Agr., Kyushu Univ.)

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419 *mPing* insertion related to salt-tolerant segregants among rice variety Gimbozu population

☆Fujisaki, T. [1], Y. Sahashi [2], K. Ochiai [2], T. Yoshikawa [2], M. Teraishi [2], Y. Okumoto [2] (1.Fac. Agri., Kyoto Univ., 2.Grad. Sch. Agr., Kyoto Univ.)

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420 Sodium transporter, SvHKT1;1, from Suporobolus virginicus plays a role under especially high salinity stress

○Tada, Y. [1], Y. Kawakami [2] (1.Tokyo University of Technology, School of Bioscience and Biotechnology, 2.Grad. Schol of Tokyo University of Technology, Bionics)

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421 Pyramiding effect of gene/QTL for heat-induced quality decline of rice in different genetic background

○Kobayashi, A. [1], K. Maruyama [2], T. Sakurai [3], Y. Mizukami [4], A. Hamagashira [4], K. Tomita [1] (1.Fukui Agr. Exp. Stn., 2.JRICAS, 3.Kochi Univ., 4.Aichi Agri. Res. Cen.)

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422 Structure and function of barley CISP genes expressed under cold conditions

Ying, M., ○S. Kidou (Grad. Sch. Nat. Sci., Nagoya City Univ.)

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501 Clarification of resistance mechanism in phosphorus-deficient resistant wheat lines derived from unutilized genetic resources

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

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502 Growth stage-specific heat stress response in wheat

☆Matsunaga, S. [1], Y. Yamasaki [2], R. Mega [2], H. Tsujimoto [2] (1.United Grad. Sch. Agr. Sci., Tottori U., 2.Arid Land Research Center, Tottori University)

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503 Comparative transcriptome analysis of synthetic wheat and common wheat under salt stress

Nakayama, R. [1], M. Safi [1], W. Ahmadzai [1], K. Sato [2], ○K. Kawaura [1] (1.KIBR, Yokohama City Univ., 2.IPSR, Okayama Univ.)

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504 Metabolic and physiological responses to progressive drought stress in bread wheat: insight for drought tolerance breeding

☆Itam, M. [1], R. Mega [2], S. Tadano [1], M. Abdelrahman [2,3], S. Matsunaga [1], Y. Yamasaki [2], K. Akashi [2,4], H. Tsujimoto [2,4] (1.United Graduate School of Agricultural Sciences, Tottori University, 2.Arid Land Research Center, Tottori University, 3.Botany Department, Aswan University, Egypt, 4.Faculty of Agriculture Tottori University)

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505 Effect of MFT on winter wheat for Japanese noodle in Hokkaido

○Sonoda, T. [1], H. Jinno [1], S. Ohnishi [1], M. Chono [2], H. Matsunaka [3] (1.Kitami Agri. Exp. Stn., HRO, 2.NICS, 3.KARC/NARO)

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506 Trials of mitochondrial genome editing: Targeted gene disruption of *NAD7* in *Arabidopsis thaliana* via mitoTALEN

☆Ayabe, H. [1], T. Hidaka [2], Y. Tamura [2], N. Tsutsumi [2], S. Arimura [2] (1.Fac. Agr., Univ. Tokyo, 2.Grad. Sch. Agr. Life Sci., Univ. Tokyo)

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507 A soybean mosaic virus resistance gene Rsv4 can inhibit multiplication of a wide range of Potyviruses

Ishibashi, K. [1], M. Saruta [1], T. Shimizu [1], M. Shu [1], T. Anai [2], K. Komatsu [1], N. Yamada [3], Y. Katayose [1], M. Ishikawa [1], M. Ishimito [1], ○A. Kaga [1] (1.NARO, 2.Univ. Saga, 3.Nagano Agri. Exp. Stn.)

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508 Molecular analysis of the soybean early senescence mutant

☆Yamatani, H. [1,2], T. Heng [1], T. Yamada [3], M. Kusaba [2], A. Kaga [1] (1.NARO, NICS, 2.Grad. Sch. Int. Sci. Life, Univ. Hiroshima, 3.Grad. Sch. Agr, Univ. Hokkaido)

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509 Hayai-Annotation Plants v1.0.2: Updated Functional Annotation System for Terrestrial Plants and Algae

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

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510 Analysis of the function of *Oryza sativa LSM1* gene for shoot development in rice

☆Kikuchi, M. [1], R. Okamoto [2], T. Yamazaki [2], H. Sunohara [3], H. Wabiko [1,2], N. Nagasawa [1,2], N. Satoh-Nagasawa [1,2] (1.Grad. Sch. Biores. Sci., Univ. Akita Pref, 2.Fac. Biores. Sci., Univ. Akita Pref., 3.Grad. Sch. Agr. & Life Sci.)

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511 QTL analysis of stay green in sorghum using a RIL population derived from Takakibi NOG

☆Jing, Z., W. Sakamoto (Institute of Plant Science and Resources, Okayama University)

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512 Optimal conditions of heavy ion-beam irradiation for mutant hunting in diploid einkorn wheat

○Murai, K. [1], Y. Kazama [1], T. Abe [2] (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.RIKEN, Nishina Cent.)

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513 Induction of 758-kb inversion using genome editing in Arabidopsis genome

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

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514 Site-directed genome modification of grain dormancy genes suppresses germination in barley

○Hisano, H. [1], R. Hoffie [2], M. Yamane [1], H. Munemori [1], J. Kumlehn [2], K. Sato [1] (1.IPSR, Okayama Univ., 2.Leibniz Institute of Plant Genetics and Crop Plant Research (IPK))

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515 Disruption of a cytoplasmic male sterility associated gene, *orf352*, using mitochondria-targeted TALEN in rice

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

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516 Relationships between a heat stress period and targeted mutagenesis efficiency in genome editing of barley

○Ogawa, T. (Institute of Agrobiological Sciences, NARO (NIAS))

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517 Expression of capsaicinoid biosynthesis genes in different pungency-fruits of 'Shishito' (*Capsicum annuum*)

☆Kondo, F. [1], K. Nemoto [2], K. Matsushima [2] (1.Grad. Sch. Sci. and Tech., Univ. Shinshu, 2.Inst. Agri. Academic Assembly Faculty, Univ. Shinshu)

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518 Genome editing using an engineered SaCas9 with NNG PAM in plants

☆Negishi, K. [1], H. Nishimasu [2], O. Nureki [2], S. Toki [1,3,4] (1.Inst. Agrobio. Sci., NARO, 2.Grad. Sch. Sci., Univ. Tokyo, 3.Grad. Sch. Nanobiol., Yokohama City Univ., 4.Kihara Inst. Biol. Res., Yokohama City Univ.)

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519 Single-base deletion in GmCHR5 increases the genistein-to-daidzein ratio in soybean seed

Sarkar, R. [1,2], F. Hashimoto [2], A. Suzuki [1], T. Anai [1], ○S. Watanabe [1] (1.Fac. Agr., Saga Univ., 2.Unit. Grad. Sch. Agr. Sci., Kagoshima Univ.)

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520 Isolation and characterization of long-grain rice mutant

○Morita, R. [1], H. Ichida [1], K. Ishii [1], Y. Hayashi [1], H. Abe [1], Y. Shirakawa [1], K. Ichinose [1], K. Tsuneizumi [1], T. Kazama [2,3], K. Toriyama [2], T. Sato [1,2], T. Abe [1] (1.RIKEN Nishina Center, 2.Fac. Agr., Tohoku Univ., 3.Fac. Agr., Kyushu Univ.)

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521 Identification of candidate causal genes for higher yield rice mutant lines using a bulk sequencing method

☆Li, F. [1], A. Simizu [1], H. Kato [2] (1.Rad. Breed. Div., Inst. Crop Sci., NAR, 2.Genet. Resour. Cent., NARO)

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522 Failure in RNAediting of *maturase K* in *Brassica rapa* carrying *Brassica maurorum-2* cytoplasm

☆Kashiwase, K. [1], K. Sunaga [1], Y. Fujita [1,2], S. Bang [1], T. Ohnishi [1] (1.Sch. Agr., Univ. Utsunomiya, 2.United Grad. Sch. Agr., Tokyo. Univ. Agr. Tec.)

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523 Progressive DNA demethylation in a hybrid between plants with different DNA methylation status

☆Matsunaga, W. [1], T. Inukai [1], T. Matsumura [2], C. Masuta [1] (1.Res. Fac. Agr., Univ. Hokkaido, 2.AIST, Hokkaido)

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601 Analysis of biomass and genome wide SNPs in F1 diallel crosses of barley

☆Sakkour, A., K. Sato (IPSR, Okayama University)

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602 Attempt to improve the heat tolerance in Japonica rice through inserting a piece of genomic region of wild rice *Oryza glumaetapula*

○Miyahara, K. [1], H. Hirabayashi [2], O. Yamaguchi [3], M. Ishibashi [3], M. Miyazaki [3], T. Wada [3] (1.Fukuoka Agri. Forest. Res. Cent. Buzen Branch, 2.Inst. Crop Sci., NARO, 3.Fukuoka Agri. Forest. Res. Cent.)

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603 Properties of endosperm starch and resistant starch (RS) in rice double mutant lacking branching enzyme (BE) I and IIb

☆Miura, S., N. Kouyama, N. Crofts, Y. Hosaka, M. Abe, N. Fujita (Facult. Biores., Akita Pref. Univ.)

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604 SS2a from indica rice cultivar recovers the sugary-1 phenotype in japonica rice

○Fujita, N., Y. Satoh, S. Miura, Y. Hosaka, M. Abe, N. Crofts (Facult. Biores. Sci., Akita Pref. Uni.)

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605 Exploration of candidate factors that regulate γ-oryzanol content in rice seeds

☆Funakoshi, T. [1], K. Hibara [2], T. Ogawa [1], T. Tezuka [1,4], D. Ohta [1,3], S. Yokoi [1,3,4] (1.Graduate School of Life and Environmental Sciences, Osaka Prefecture University, 2.Faculty of Agriculture, Kibi International University, 3.Bioeconomy Research Institute, Research Center for the 21st Century, Osaka Prefecture University, 4.Education and Research Field, Osaka Prefecture University)

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606 Screening for soybean *isoflavone synthase* (*IFS*) mutants using TILLING

○Yoshikawa, T. [1], M. Teraishi [1], T. Anai [2], Y. Okumoto [1] (1.Grad. Sch. Agri. Kyoto Univ., 2.Saga Univ.)

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607 Computational modeling of tiller angle dynamics in rice

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

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608 Optimization of 3D tissue growth model in plants using genetic algorithm

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

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609 Grain size and plant height regulation of Heterotrimeric G-protein in rice

☆Chaya, G., K. Yamaguchi, Y. Iwasaki, K. Miura (Grad. Sch. Biosci., Fukui Pref. Univ.)

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610 Analysis of *abnormal cell division 1* (*abc1*) mutant showing defects in cell division and differentiation during endosperm development

☆Suzuki, T. [1], K. Izawa [2], Y. Takafuji [2], T. Hattori [2], M. Nosaka [1], K. Ta [1], S. Shimizu-Sato [1], Y. Sato [1] (1.National Institute of Genetics, 2.Grad. Sch. Bioagric. Sci., Nagoya Univ.)

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611 Functional analyses of the Elongator genes that regulate rice development

☆Matsumoto, H. [1], Y. Yasui [1], Y. Ohmori [2], W. Tanaka [1,3], T. Ishikawa [4], H. Numa [4], K. Shirasawa [4,5], Y. Taniguchi [4], J. Tanaka [4], Y. Suzuki [4], H. Hirano [1] (1.Grad. Sch. Sci., Univ. Tokyo, 2.Grad. Sch. Agric. Life Sci., Univ. Tokyo, 3.Grad. Sch. Integr. Sci. Life, Hiroshima Univ., 4.NARO, 5.Present affiliation: Kazusa DNA Res. Inst.)

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612 Regulation of plastochron by MANY-NODED DWARF genes in barley

○Hibara, K. [1], S. Taketa [2], J. Itoh [3] (1.School of Agriculture, Kibi International University, 2.Institute of Plant Science and Resources, Okayama University, 3.Graduate School of Agricultural and Life Sciences, University of Tokyo)

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613 Molecular genetic analysis of mechanism for suppression of ectopic meristem differentiation by using *adaxial-abaxial bipolar leaf 2* mutant in rice

☆Sato, R. [1], H. Sunohara [2], J. Itoh [3], H. Wabiko [1], N. Nagasawa [1], N. Satoh-Nagasawa [1] (1.Grad. Sch. Biores. Sci., Univ. Akita Pref., 2.Fac. Avi. Sci., Univ. Kumamoto, 3.Grad. Sch. Agr. & Life Sci., Univ. Tokyo)

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614 Genetic and histological analysis of embryo-like structure formation in unfertilized ovule culture of gentian

☆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)

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615 Isolation of the candidate genes of pre-harvest sprouting resistance QTL, *qSdr6a* in rice

☆Sano, S. [1], N. Iijima [1], K. Sugimoto [2], T. Hoshino [1] (1.Grad. Sch. Agr., Yamagata Univ., 2.Inst. Crop Sci., NARO)

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616 Relationship between *BoFLC2* gene and varietal differences in vernalization response in cabbage

☆Itabashi, E. [1], D. Shea [2], N. Fukino [1,3], R. Fujimoto [4], K. Okazaki [2], T. Kakizaki [1], T. Ohara [1] (1.Inst. Veg. Floric. Sci., NARO, 2.Grad. Sch. Sci. Tech., Niigata Univ., 3.Headquarter, NARO, 4.Grad. Sch. Agric. Sci., Kobe Univ.)

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617 Characterization of nutritropism and its possible role in rice

○Ohmori, Y., K. Yamazaki, T. Fujiwara (Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo)

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618 Evaluation of photo-insensitive phase in four rice cultivars with different photoperiod sensitivity using photoperiodic transfer treatments at cropping seasons

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

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619 Analysis of florigen intercellular transfer by live imaging

☆Nakamura, J., M. Tanaka, H. Tsuji (Kihara Inst. Biol. Res., Yokohama City Univ.)

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620 Epigenetic regulation of shoot apical meristem methylome

Higo, A. [1], N. Saihara [1], Y. Higashi [2], F. Miura [3], T. Ito [3], ○H. Tsuji [1] (1.Kihara Institute for Biological Research, Yokohama City University, 2.Grad. Sch. Biol. Sci., Nara Inst. Sci. Technol., 3.Department of Biochemistry, Kyushu University Graduate School of Medical Sciences)

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621 Functional evaluation of a novel earliness QTL by expression analysis of flowering-related genes at different developmental stages in barley

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

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622 QTL mapping for prostrate trait in barley

○Kato, K., K. Shimoto, H. Nishida (Grad. Sch. Environ. Life Sci., Okayama U.)

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623 Intraspecific variation of field growth dynamics in barley

○Saisho, D. [1], S. Okada [1], J. Ito [2], H. Tsuji [2], K. Takahagi [3,4], K. Mochida [1,2,4], T. Hirayama [1] (1.IPSR, Okayama Univ., 2.KIBR, Yokohama City Univ., 3.Grad. Sch. Nanobio., Yokohama City U., 4.CSRS, RIKEN)

Poster presentations

P001 Attempts to insert exogenous genes into mitochondrial genome via biolistic bombardment

☆Nakazato, I. [1], N. Koizuka [3], N. Tsutsumi [2], S. Arimura [2] (1.Fac. Agr., Univ. Tokyo, 2.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 3.Col. Agri., Tamagawa Univ.)

P002 Cancelled

P003 Pyramiding *Ba* (blue aleurone) genes to develop darker blue grain wheat

○Watanabe, N. [1], P. Martinek [2] (1.The Little Nursery, 2.Agrotest Fyto Ltd.)

P004 Effect of DNA marker selection on early generation population of wheat to improve flower yield

○Ikenaga, S. [1], G. Ishikawa [2], H. Ito [1], A. Nakamaru [1], Y. Taniguchi [1], T. Takayama [1] (1.Tohoku Agric. Res. Cent., NARO, 2.Inst. Crop Sci., NARO)

P005 The establishment of breeding system in Chinese chive using the amphimixis strain and two reproduction-linked marker

○Nakazawa, Y., Y. Kashiwaya, K. Tasaki, K. Taguchi, Y. Murakawa (Tochigi Prefectural Agricultural Experiment Station)

P006 Comparison between canopy temperature (CT) and visual selection as indirect selection approach for yield at a wheat breeding program

○Ohnishi, S., K. Morita, T. Sonoda, H. Kiuchi, H. Jinno (HRO Kitami AES)

P007 Cancelled

P008 Characterization of RNA silenced and grafted tomato: *SlFAD7*

○Nishiguchi, M. [1], S. Nakamura [1], K. Hondo [2], Y. Shinozaki [3], H. Ezura [3], K. Kobayashi [1] (1.Fac. Agric., Ehime Univ., 2.ADRES, Ehime Univ., 3.Fac. Life Environ. Sci., Univ. Tsukuba)

P009 Evaluation of strawberry disease resistance to anthracnose and fusarium wilt, and discrimination from other cultivars of strawberry ‘Saga i5’

○Kinoshita, T., T. Tomosada, M. Nishi, A. Furuta (Saga Agr. Res. Center)

P010 Trial measurement of glossiness of cooked rice by gloss meter

☆Akita, K., Y. Fukazawa, K. Okamoto (Plant Biotech. Inst. Ibaraki Agri. Cent.)

P011 Approach to breeding of Miyazaki original melon ~Production of excellent lines from hybrid generations between varieties by crossing method~

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

P012 Genetic analysis for rice varieties that contribute to efficient and sustainable use of phosphorus resources

☆Ito, R. [1], K. Sasaki [2], K. Yoshida [1] (1.Grad. Sch. Agriculture, Univ. Tokyo, 2.JIRCAS)

P013 Development of near-isogenic line “TohokuIL17” of rice cultivar “Hitomebore”, having *Pias* and *Xa1* derived from “Asominori”

☆Nakagomi, Y., T. Endo, N. Machi, Y. Ishimori, H. Shimazu (Miyagi Pref. Furukawa Agric. Exp. Stn.)

P014 Development of adaptive rice lines for extreme weather having both cold and high-temperature tolerance

○Ishimori, Y. [1], T. Endo [1], N. Machi [1], Y. Nakagomi [1], H. Sato [2], K. Saeki [3] (1.Miyagi Prefectural Furukawa Agricultural Experiment Station, 2.Miyagi Prefectural Northern Regional Promotion Office, 3.Miyagi Prefectural Office)

P015 ”Akibare”, a new high-yielding kintoki bean variety

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

P016 Development of soft wheat lines with glutenin subunits introdueced from a club wheat for eastern warm-temperature area in Japan

☆Tougou, M. [1], H. Kojima [1], C. Otobe [1], M. Fujita [1], T. Takayama [2], T. Ikeda [3] (1.Institute of Crop Science, NARO, 2.Tohoku Agricultural Research Center, NARO, 3.Western Region Agricultural Research Center, NARO)

P017 Operation of government - university collaborative genetic resources conservation project - Case study of 'Mitaka Osawa Wasabi' , Mitaka City, Tokyo

☆Hattori, M., S. Kunishima, N. Haga, K. Yamane (Fac. Appl. Biol. Sch., Univ. Gifu)

P018 Genetic variation of rice germplasm in Guinea

○Fukuta, Y. [1], S. Yanagihara [2], N. Nguyen [3], O. Nguyen [3], M. Barry [4], S. Diawara [4], O. Bah [4] (1.TRRF/JIRCAS, 2.JIRCAS, 3.Agricultural Genetic Institute, Vietnam, 4.Agricutiral Research Institute in Gunia)

P019 Development of barley breeding line with pre-harvest sprouting tolerance using *Qsd1* strong allele and identification of new QTLs

☆Ishiharajima, Y. [1], T. Kato [1], T. Tanaka [2], S. Fukuoka [2], A. Shomura [2], H. Aoki [3], T. Tsukahara [1], J. Aoki [1], T. Nagamine [3] (1.Tochigi Pref. Agric. Exp. Stn., 2.NICS/NARO, 3.CARC/NARO)

P020 Phylogenetic analysis of eight accessions of *Nicotiana suaveolens* using chloroplast DNA

☆Sadahisa, K. [1], H. He [1], S. Yokoi [1,2,3], T. Tezuka [1,2] (1.Graduate School of Life and Environmental Sciences, Osaka Prefecture University, 2.Education and Research Field, Osaka Prefecture University, 3.Bioeconomy Research Institute, Research Center for the 21st Century, Osaka Prefecture University)

P021 Phylogenetic analysis using SSR markers and investigation of the distribution of hybrid weakness genes in cultivated pepper species

☆Tatsuta, T. [1], S. Yokoi [1,2,3], T. Tezuka [1,2] (1.Grad. Sch. Life Envi. Sci., Osaka Pref. Univ., 2.Educ. Res. Field, Osaka Pref. Univ., 3.Bioecon. Res. Inst., Res. Center 21st Century, Osaka Pref. Univ.)

P022 Genetic analysis of 'Sarude' panicle shape in foxtail millet

Saito, Y., ○K. Fukunaga (Fac. Life Environ. Sci., Prefectural Univ. Hiroshima)

P023 Identification of mutations of *Ccs* gene responsible for pepper fruit color variation and development of their DNA markers

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

P024 de novo genome assembly of two wild tomatoes

Takei, H. [1], K. Shirasawa [2], K. Kuwabara [1], Y. Matsuzawa [3], S. Iioka [3], ○T. Ariizumi [1] (1.Grad. Sch. Sci. Univ. Tsukuba, 2.Kazusa DNA Res. Inst., 3.Tokita Seed)

P025 Whole-genome sequence analysis of semidwarf-isogenic lines of rice variety Koshihikari

Tokuyama, R., ○M. Tomita (Res. Inst. Green Sci. & Tech., Shizuoka Univ.)

P026 Development of breeding resources for male sterility breeding using genetic marker in Japanese cedar

○Mishima, K. [1], T. Hirao [1], M. Tsubomura [1], T. Iki [1], M. Miura [1], M. Kurita [1], N. Kuramoto [1], A. Watanabe [2], M. Takahashi [1] (1.Forest Breeding Center, 2.Univ. Kyushu)

P027 Identifying genomic region for tuber color of radish (*Raphanus sativus*) in BC1F1 generation

○Takata, M., T. Segawa, A. Katayama, M. Sasazuka, H. Takagi (Ishikawa Prefectural University)

P028 Creation of genome-wide SSR markers for *Actinidia rufa*, a wild relative of kiwifruit using genomic information

○Sugita-Konishi, S. [1], K. Sato [1], E. Mori [1], M. Hazebayashi [1], K. Gomi [1], M. Tabuchi [1], G. Kisaki [2], T. Fukuda [2], T. Manabe [2], K. Hamano [2], M. Ohtani [2], K. Akimitsu [1], I. Kataoka [1] (1.Faculty of Agriculture, Kagawa University, 2.Fuchu Fruit Tree Experiment Branch, Kagawa Prefectural Agricultural Experiment Station)

P029 Identification of candidate gene underlying a soybean flowering time QTL (qFT12.1) on chromosome 12

○Liu, D. [1,2], D. Xu [1] (1.JIRCAS, 2.Col. Plant Sci., Jilin U., China)

P030 Construction of linkage map by GRAS-Di marker analysis in bread wheat

○Suzuki, K. [1], Y. Takeuchi [1], H. Enoki [1], A. Torada [2] (1.TOYOTA MOTOR CORPORATION, 2.HOKUREN Agric. Res. Inst.)

P031 Loci controlling spike and seed related traits in spring wheat in Hokkaido

○Torada, A. [1], K. Suzuki [2], Y. Tanaka [1], Y. Takenouchi [1], H. Enoki [2] (1.HOKUREN Agricultural Research Institute, 2.TOYOTA)

P032 Genetic Dissection of Aphid Resistance in a Sorghum Cultivar

☆Omollo, E. [1], N. Ohnishi [1], M. Hunja [3], H. Kanegae [2], I. Galis [1], W. Sakamoto [1] (1.Okayama University, Institute of Plant Science and Resources (IPSR), 2.Research Center for Agricultural Information Technology, NARO, 3.Jomo Kenyatta University of Science and Technology)

P033 QTL analysis for green stem disorder insensitivity of soybean with the recombinant inbred lines from cross between "Suzuotome" and "Fukuyutaka"

○Ogata, D. [1], F. Taguchi-Shiobara [2], R. Okuno [1], O. Uchikawa [3], M. Miyazaki [1] (1.Fukuoka Agric. Forest. Res. Cent., 2.Inst. Crop Sci., NARO, 3.Fukuoka Pref. Office)

P034 Genetic analysis of inflorescence variation between Spinacia species

☆Fujita, H. [1], M. Takahashi [1], Y. Onodera [2] (1.Grad. Sch. Agr., Hokkaido Univ., 2.Res. Fac. Agr., Hokkaido Univ.)

P035 Identifying the genomic region for flowering in *Brassica rapa* cv. "CHOY SUM EX CHINA 3" originated in Malaysia

☆Itoh, N. [1], M. Nishikawa [1], T. Segawa [1], T. Imamura [1], A. Abe [2], M. Sasazuka [1], H. Takagi [1] (1.Ishikawa Prefectural University, 2.Iwate Biotechnology Research Center)

P036 Ionome-coupled QTL analysis of element contents in sorghum mature seeds using Takakibi RIL population

☆Wacera, F. [1], T. Fujiwara [2], K. Yamazaki [2], H. Takanashi [2], N. Tsutsumi [2], H. Kanegae [3], W. Sakamoto [1] (1.Okayama University, Institute of Plant Science and Resources, 2.The University of Tokyo, 3.National Agriculture and Food Research Organization)

P037 Identification of QTL for branching with the recombinant inbred lines from cross between Japanese and modern US soybean varieties

○Fukuda, A. [1], R. Okuno [2], O. Uchikawa [2], S. Morita [2], T. Sugimoto [3], A. Hishinuma [4], S. Kato [4,6], T. Sayama [5], Y. Yokota [1], T. Shimizu [1], F. Taguchi-Shiobara [1], E. Ogiso-Tanaka [1], A. Kaga [1], M. Hajika [1], M. Ishimoto [1] (1.NICS, NARO, 2.Fukuoka Agr. Forest Res. Cent., 3.Hyogo Pre. Tech. Cent. Arg. Forest. Fish., 4.TARC, NARO, 5.WARC, NARO, 6.MAFF)

P038 QTL analysis of low cadmium accumulation in grain derived from wheat line “Tanikeisho 5121CD”

○Kojima, H. [1,2], C. Otobe [1,2], G. Ishikawa [1], Y. Fujita [1], M. Fujita [1], M. Tougou [1], T. Takayama [3] (1.NICS, NARO, 2.Grad. Sch. Life Envi. Sci., Univ. of Tsukuba, 3.TARC, NARO)

P039 Phylogenetic analysis for genes related to biomass of soybean using haplotype-based GWAS

☆Hamazaki, K. [1], M. Ishimori [1], L. Sakamoto [1], Y. Toda [1], Y. Omori [1], Y. Yamasaki [2], H. Takahashi [3], H. Takanashi [1], M. Tsuda [4], H. Kajiya-Kanegae [5], H. Tsujimoto [2], Y. Sawada

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

P040 Genetic analysis on heading time of barley (*Hordeum vulgare*) under multiple environments

☆Okada, S. [1], D. Saisho [1], J. Ito [2], H. Tsuji [2], K. Takahagi [3], K. Mochida [1,3], T. Hirayama [1] (1.IPSR, Okayama U., 2.KIBR, Yokohama City Univ., 3.RIKEN CSRS)

P041 Genome-wide association study for grain yield components of Japanese wheat core collection under high-temperature treatment after heading

☆Terada, T. [1], T. Iinuma [2], K. Yamazaki [2], Z. Nishio [1,2] (1.Grad. Sch. Agr., Tokyo Univ. Agr., 2.Fac. Agr., Tokyo Univ. Agr.)

P042 Modifying leafstalk color of Brassica rapa cv. ‘Nakajimana’ for applying to baby leaf salad

☆Hongo, S., S. Sakamoto, M. Sasazuka, N. Ito, H. Kutuzawa, T. Segawa, H. Takagi (Ishikawa Pref. Univ.)

P043 Estimation of irradiation dose of heavy-ion beam for efficient mutation breeding using whole-genome mutation analysis

☆Ishii, K., S. Ohbu, Y. Shirakawa, T. Abe (RIKEN Nishina Cent.)

P044 Identification of soybean mutants in the gene associated with cadmium accumulation

☆Hirata, K. [1], K. Takagi [1], T. Sayama [2], A. Kaga [3], A. Kikuchi [1], M. Ishimoto [3] (1.TARC/NARO, 2.WARC/NARO, 3.NICS/NARO)

P045 Study on the reciprocal recombination across short repeated sequences dispersed throughout the wheat mitochondrial genome

☆Tsujimura, M. [1], M. Sato [2], I. Nagashima [1], N. Mori [3], T. Terachi [4] (1.Plant Organelle Genomics R.C., Kyoto Sangyo U., 2.Fac. Life Sci., Kyoto Sangyo U., 3.Grad. Sch. Agr. Sci., Kobe Univ., 4.Fac. Life Sci., Kyoto Sangyo U.)

P046 A novel FLOURY ENDOSPERM2 (FLO2)-interacting protein, is involved in maintaining fertility and seed quality in rice

☆Suzuki, R. [1], T. Imamura [1,2], Y. Nonaga [1], H. Kusano [1,3], H. Teramura [1], K. Sekine [4], T. Yamashita [5], H. Shimada [1] (1.Dept. of Bio. Sci. and Tech., Tokyo Univ. of Sci., 2.Rese. inst. for Bior. and Biot., Ishikawa Pref. Univ., 3.Rese. Inst. for Sust. Huma., Kyoto Univ., 4.Fac. of Agri., Univ. of the Ryukyus, 5.Fac. of Agri., Iwate Univ.)

P047 *PgPM19*, a pearl millet (*Pennisetum glaucum*) gene encoding a putative plasma membrane protein, is involved in drought and salinity stress responses

○Yu, P. [1], H. Shinde [1], A. Dudhate [1], S. Gupta [2], D. Tsugama [1], S. Liu [3], T. Takano [1] (1.ANESC., Univ. Tokyo, 2.ICRIST, 3.Zhejiang A & F Univ.)

P048 Molecular cloning and functional characterization of PgDHNs from pearl millet

○Qu, Y. [1], A. Dudhate [1], H. Shinde [1], S. Gupta [2], D. Tsugama [1], S. Liu [3], T. Takano [1] (1.Laboratory of Environmental stress tolerance mechanism ANSC, The University of Tokyo, Japan, 2.International Crops Research Institute for the Semi-Arid Tropics, 3.Zhejiang Agricultural and Forestry University)

P049 Functional and genetic analyses identify *qGF1* regulating lodging resistance in rice

☆Agata, A. [1], R. Ishihara [1], T. Kuroha [2], K. Nishitani [3], H. Kitano [4], T. Hobo [4] (1.Grad. Sch. Bioagr. Sci., Nagoya U., 2.NIAS, 3.Kanagawa U., 4.Biosci. Biotec. Ctr., Nagoya U.)

P050 Deposition of ester-linked hydroxycinnamate in sorghum cell wall and attempt to modify cell wall by genetic transformation

○Izawa, K. [1], A. Osivand [1], M. Ito [1], S. Nakamura [1], T. Matsumoto [1], H. Ezura [2] (1.Bioscience, Toyo Univ. Agri., 2.Fac. Life Environ. Sci. & T-PIRC, Univ. Tsukuba)

P051 Potential role of OsSub53, 63 in regulating rice seed development using genome editing

○Nishikata, C., A. Toukairin, Y. Saitoh (Fac. Agri., Iwate Univ.)

P052 An attempt of functional analysis of *Trifolium repens SLM1* related to the compound leaf development by genome editing

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

P053 Regulation of flowering time by epigenome editing targeting *FLOWERING LOCUS C* in *Arabidopsis thaliana*

☆Igarashi, K. [1], T. Tsuchiya [2] (1.Grand. Sch. ALS., Nihon Univ., 2.Coll. Biores. Sci., Nihon Univ.)

P054 CRISPR/Cas9-RNP complex mediated genome editing in wheat

☆Mitsumura, A. [1], Y. Kamiya [1], S. Toki [1,2], M. Endo [2], E. Kato [3], K. Kawaura [1] (1.KIBR, Yokohama City U., 2.Institute of Agrobiological Sciences, NARO (NIAS), 3.Advanced Analysis Center, NARO (NAAC))

P055 Analysis of a mutant for high-sugar content in grain sorghum endosperm

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

P056 Accumulation effects of mutations in the wheat *AP2* homoeologs on cleistogamous flowering

☆Nanape, A., K. Watanabe, H. Haine, K. Kakeda (Graduate School of Bioresources, Mie University)

P057 Evaluation of agronomic traits of epigenetically edited potato prototypic lines

○Yamazaki, M. [1], Y. Tabei [2], Y. Wakasa [1], A. Kasai [3], T. Harada [3], S. Akada [3] (1.Inst. Agrobiol. Sci., NARO, 2.HQ, NARO, 3.Fac. Agric. Life Sci., Hirosaki Univ.)

P058 Characterization of the chloroplast DNA fragments conferring autonomous replication ability to the plasmid introduced into chloroplast

☆Baba, H. [1], K. Nakamoto [2], K. Uemura [3], T. Terachi [3] (1.Fac. Life Sci., Kyoto Sangyo U., 2.Grad. Sch. Life Sci., Kyoto Sangyo U., 3.Fac. Life Sci., Kyoto Sangyo U.)

P059 Studies of the unexpected transplastomic plants appeared in the screening of chloroplast DNA fragments that confer autonomous replication ability to the plasmid

☆Uemura, K. [1], K. Nakamoto [2], H. Baba [3], K. Kojima [2], T. Terachi [1] (1.Fac. Life Sci., Kyoto Sangyo U., 2.Grad. Sch. Life Sci., Kyoto Sangyo U., 3.Fac. Life Sci., Kyoto Sangyo U.)

P060 Does the positioning of plants in the walk-in growth chamber affect transcriptomes?

☆Yoshino, K. [1], S. Teramoto [2], Y. Numajiri [2], R. Nishijima [1], T. Kawakatsu [1] (1.NARO, 2.NARO)

P061 Phosphorylation state of proteasome subunits confirmed by Phos-tag diagonal electrophoresis

○Hirano, H. [1], A. Kimura [1], N. Sato [1], M. Osada [1], E. Kinoshita [2], K. Fujita [1] (1.Grad. Sch. Health Sci., Gunma Paz Univ., 2.Grad. Sch. Biomed. Health Sci., Hiroshima Univ.)

P062 Metabolome analysis of rice seedlings for high temperature resistance evaluation

○Sasaki, K. [1,2], M. Wakayama [1], T. Soga [1], M. Tomita [1] (1.Inst. for Advanced Biosciences, Keio Univ., 2.Yamagata Integrated Agr. Res. Cent.)

P063 Mikan genome database (MiGD): integrated database of genome annotation, genomic diversity, and CAPS marker information for mandarin molecular breeding

○Kawahara, Y. [1,2], T. Endo [3], M. Omura [4], Y. Teramoto [5], T. Itoh [2], H. Fujii [3], T. Shimada [3] (1.Institute of Crop Science, NARO (NICS), 2.Advanced Analysis Center, NARO (NAAC), 3.Institute of Fruit Tree and Tea Science, NARO (NIFTS), 4.Faculty of Agriculture, Shizuoka University, 5.IMSBIO Co., Ltd.)

P064 Resistance to Phytophthora sojae in breeding soybean lines

○Kono, Y. [1], J. Matsuoka [1], M. Takahashi [1], A. Kikuchi [2], K. Takahashi [3], Y. Takada [4] (1.NARO, CRARC, 2.NARO, TARC, 3.NARO, NICS, 4.NARO, WARC)

P065 Bulk segregant analysis for Phytophthora stem rot resistance in adzuki bean using GRAS-Di

☆Horikawa, K. [1], Y. Yamashita [1], C. Souma [1], Y. Horiuchi [2], T. Suzuki [1] (1.Hokkaido Research Organization Central Agricultural Experiment Station, 2.Hokkaido Research Organization Tokachi Agricultural Experiment Station)

P066 Growing test of *BSR1*-overexpressing rice lines using improved promoters in the isolation field in 2019: evaluation of blast resistance and agronomic traits

☆Maeda, S., N. Hayashi, M. Yamazaki, Y. Nishizawa, M. Mori (NIAS)

P067 Detection of QTL for brown planthopper resistance of *japonica* rice variety, 'Akiharuka'

☆Nakanishi, A. [1], T. Kataoka [1], K. Tamura [1], S. Fukuoka [2], U. Yamanouchi [2], M. Matsumura [3], S. Sanada [1], T. Fujii [1], Y. Takeuchi [1] (1.NARO/KARC, 2.NARO/NICS, 3.NARO)

P068 Evaluation of lines with resistance to pecky rice bugs derived from Davao1 in Tentakaku genetic background

○Ozaki, H., Y. Aoki (Toyama Pref. Agr. Fores. Fish. Res. Cent)

P069 Experimental breeding for pre-harvest sprouting resistance in white wheat lines

○Ito, H., S. Ikenaga, A. Nakamaru, Y. Taniguchi, T. Takayama (Tohoku Agr. Res. Ctr., NARO)

P070 The avoidance effect of heat-induced spikelet sterility by qEMF3, a QTL for the early-morning flowering trait in different japonica-rice genetic backgrounds

○Hirabayashi, H. [1], T. Tanogashira [2], A. Tanaka [2], M. Takemure [2], K. Wakamatsu [2] (1.Inst. of Crop Sci., NARO, 2.Kagoshima Pref. Inst. for Agri. Devel.)

P071 Multispectral imaging to predict drought resistance and growth in a soybean germplasm collection

☆Sakurai, K. [1], Y. Toda [2], Y. Omori [2], Y. Yamasaki [3], H. Takahashi [4], H. Takanashi [2], M. Tsuda [5], M. Ishimori [2], H. Tsujimoto [3], A. Kaga [6], M. Nakazono [4], T. Fujiwara [2], H. Iwata [2] (1.Fac. Agr., Univ. Tokyo, 2.Grad. Sch. Agr. Life Sci., Univ. Tokyo, 3.Arid Land Res. Ctr., Tottori Univ., 4.Grad. Sch. Bioagri. Sci., Nagoya Univ., 5.T-PIRC, Univ. Tsukuba, 6.Inst. Crop Sci., NARO)

P072 QTL analysis for salt tolerance in a RIL population derived from two salt tolerant soybean cultivars

Nguyen, T. [1,2], G. Kumawat [1,3], ○D. Xu [1] (1.JIRCAS, 2.Agrivultural Genetics Institute, Vietnam, 3.Indian Institute of Soybean Research)

P073 Development of leaves with aberrant cell types in a hypomorphic *argonaute1* mutant of *Arabidopsis* treated transiently at excessively high temperatures

○Watanabe, A. [1], M. Onishi [1], H. Takahashi [2], K. Ueda [1], K. Sakurai [1], H. Akagi [1] (1.Fac. Bioresource Sci., Akita Prefectural Univ., 2.Cluster of Agricultural Sci., Fukushima Univ.)

P074 ROS regulatory systems in Arabidopsis deficient in Elm2 gene under a combination of heat stress and drought

☆Lee, H., N. Suzuki (Sophia University)

P075 Response of Arabidopsis lacking ROS scavenging enzyme RBOHF to a combination of heat stress and drought

☆Fujikawa, R., N. Suzuki (Sophia University)

P076 Response to short heat stress and heat memory in Arabidopsis

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

P077 Selection criteria of suitable genotypes of soybean under hot environment in Sudan

☆Balla, M. [1,2], S. Ibrahim [1,2] (1.United Graduate School of Agricultural Science Tottori University, 2.Agricultural Research Corporation (ARC), Sudan)

P078 Characterization of quadruple knockouts of Arabidopsis group I bZIP protein genes

○Yoon, H. [1], K. Fujino [2], T. Takano [1], D. Tsugama [1] (1.Asian Natural Environmental Science Center (ANESC), The University of Tokyo, 2.Laboratory of Crop Physiology, Research Faculty of Agriculture, Hokkaido University)

P079 Marker-assisted selection of pyramided lines and multiplex lines of white potato cyst nematode resistance genes in potato

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

P080 Development of β-triketone herbicides resistant broccoli by introducing *HIS1* (*HPPD INHIBITOR SENSITIVE 1*) gene from Japonica rice

☆Oshima, M. [1,2], M. Ohshima [2], K. Sekino [3], A. Yamazaki [3], Y. Tabei [2] (1.Facul. Life & Env. Sci., U.Tsukuba, 2.NARO, 3.SDS Biotech K.K.)

P081 Genetic analysis for yield, starch content, dry matter rate and anthocyanin content of sweetpotato (*Ipomoea batatas*) storage root grown under field condition

☆Haque, E. [1], E. Yamamoto [2], K. Shirasawa [2], H. Tabuchi [1], U. Yoon [3], S. Isobe [2], M. Tanaka [1] (1.Kyushu Okinawa Agri. Res. Cent., NARO, 2.Kazusa DNA Res. Inst., 3.Natl. Inst. Agri. Sci., Korea)

P082 Evaluation of plant growth-promoting action of Arthrobacter bacteria

○Matsudaira, O.

P083 Endosperm characterization of starch structure mutated rice strains and analysis of responsible genes

☆Nagamatsu, S. [1], T. Wada [1], R. Matsushima [2], N. Fujita [3], S. Miura [3], N. Crofts [3], Y. Hosaka [3], T. Kumamaru [4] (1.Fukuoka Agr. Forest. Res. Cent., 2.Inst. of Plant Sci. and Res., Okayama Univ., 3.Akita Pref. Univ., 4.Grad. Sch. Agr., Kyushu Univ.)

P084 Characterization of the flesh color variation in sweetpotato cultivar "Beniharuka"

☆Suematsu, K., Y. Kai (KARC, NARO)

P085 Verification of heterosis molecular mechanism in early sugar beet growth

Ohkubo, M., K. Satoh, T. Kubo, ○K. Kitazaki (Res. Fac. Agr., Hokkaido Univ.)

P086 Cancelled

P087 Relationship between the accumulation of catechin and grain dormancy on wheat

○Himi, E. (School of Agriculture, Kibi International University)

P088 Variation in the gene structure and epigenetically expression pattern of *WCO1* (*WHEAT CONSTANS 1*) gene in early- and late-flowering *Aegilops tauschii* accessions

☆Hayamizu, S. [1], T. Oyama [1], N. Mizuno [2], K. Murai [1] (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.Grad. Sch. Agr., Kyoto University)

P089 Identification of the gene for extra early-flowering phenotype in *extra early-flowering 4* developed by heavy ion-beams irradiation in diploid einkorn wheat

☆Hashimoto, K. [1], A. Nishiura [1], Y. Kazama [1], H. Ichida [2], T. Abe [2], K. Murai [1] (1.Fac. Biosci. Biotech., Fukui Pref. Univ., 2.RIKEN, Nishina Cent.)

P090 Characterization of vernalization trait in Chinese cabbage introgressed cabbage BoFLC2

Nishida, N. [1], K. Okazaki [2], ○R. Fujimoto [1] (1.Grad. Sch. Agric. Sci., Kobe Univ., 2.Grad. Sch. Sci. Tech., Niigata Univ.)

P091 Flowering response of black oat (*Avena strigosa*) to different sowing time: Evaluation of days to heading using recombinant inbred lines

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

P092 Isolation of barley mutants which develop compound starch grains in endosperm

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

P093 The effect of rice QTLs for juvenile-adult phase transition, qJA1 and qJA2, on local adaptability

☆Fujimoto, G. [1], T. Watanabe [1], E. Arakawa [2], Y. Koide [3], Y. Monden [4], M. Teraishi [5], J. Itoh [2], K. Hibara [2,6], Y. Nagato [2], Y. Okumoto [5], T. Yoshikawa [5] (1.Fac. Agri., Kyoto Univ., 2.Grad. Sch. Agri. Sci., Univ. Tokyo, 3.Res. Fac. Agric., Hokkaido Univ., 4.Grad. Sch. Environ. Life Sci., Okayama Univ., 5.Grad. Sch. Agri., Kyoto Univ., 6.Sch. Agri., Kibi Int. Univ.)

P094 Studies on the mechanisms of cell fate specifiaction in rice endosperm development

☆Takafuji, Y. [1], K. Ta [2], T. Suzuki [2], S. Sato (Shimizu) [2], M. Takahashi (Nosaka) [2], Y. Sato [2], W. Kimura [1], T. Oiwa [1], S. Takeda [1], T. Hattori [1] (1.Grad. Sch. Bioagri. Sci., Nagoya Univ., 2.Natl. Inst. Genet.)

P095 Analysis of juvenile-to-adult phase transition factors using rice core collection

☆Yamamoto, M. [1], T. Tezuka [1,2], S. Yokoi [1,2,3] (1.Graduate School of Life and Environmental Science, Osaka Prefecture University, 2.Education and Research Field,

Osaka Prefecture University, 3.Bioeconomy Research Institute, Research Center for 21st Century, Osaka Prefecture University)

P096 Possible involvement of homoeologous interchange in deficiency of Q chromosome detected in an interspecific hybrid of *Nicotiana* overcoming hybrid lethality

☆Nakata, K. [1], D. Nagashima [1], W. Marubashi [2], M. Kanekatsu [1], T. Yamada [1] (1.Grad. Sch. Agr., Tokyo U. Agr. Tech., 2.Fac. Agr., Meiji U.)

P097 Establishment of *in vitro* cutting method in green tea cultivars (*Camellia sinensis*)

☆Okubo, H. [1], S. Inaba [2], K. Furukawa [1] (1.Department of Chemistry and Biochemistry, National Institute of Technology (KOSEN), Numazu College, 2.Department of Integrated System Engineering, Advanced Course, National Institute of Technology (KOSEN), Numazu College)

P098 Effect of condition of leaf explants and the combination of plant hormones on induction of callus in *Cornus florida*

○Ooka, H. [1], H. Yokoyama [1], M. Asaka [1], Y. Tatsumi [1], S. Nagashima [1,2], E. Sim Zixuan [1,3], Y. Takahara [4] (1.Dept. Chem. Mat. Sci., NIT (KOSEN), Gunma, 2.Dept. Appl. Chem. Biotech., Chiba Univ., 3.Grad. Sch. Biosci. Biotech., Tokyo Tech., 4.Dept. Bioeng., Nagaoka Univ. Tech.)

P099 Some sugar beet Rf1 alleles lose their ability to restore pollen fertility of Owen-type CMS plants in high-temperature environments

○Matsuhira, H. [1], Y. Kuroda [1], K. Kitazaki [2], T. Kubo [2] (1.Hokkaido Agricultural Research Center, NARO, 2.Grad. Sch. Agr., Hokkaido Univ.)

P100 Expression pattern analysis of candidate genes for dioecism and monoecism in spinach

☆Sudo, Y. [1], T. Osabe [2], H. Hirakawa [3], Y. Suzuki [4], Y. Onodera [1] (1.Grad. Sch. Agr., Hokkaido Univ., 2.Sch. Agr., Hokkaido Univ., 3.Kazusa DNA Res. Inst., 4.Grad. Sch. Fro. Sci., Univ. Tokyo)
