

PROCEEDINGS

PERIPI-2017 International Seminar

Sustainable Use of Genetic Resources for Quality and Productivity Improvement



October 2nd, 2017
IPB International Convention Center- IPB ICC
Bogor, Indonesia

PERIPI
Indonesian Breeding Science Society
August 2018

Title:

Proceedings of PERIPI-2017 International Seminar

Theme:

Sustainable Use of Genetic Resources for Quality and Productivity Improvement

Organizing Committee:

Chairperson – Desta Wirnas, Vice Chairperson – Awang Maharijaya, Secretary – Anggi Nindita, Treasurer – Siti Marwiyah, Member – Syarifah Iis Aisyah, Megayani Sri Rahayu, Trikoesoemaningtyas, Yudiwanti Wahyu, Willy Bayuardi

Reviewer:

Surjono H Sutjahjo (Coordinator of Genetic and Plant Breeding Division, Bogor Agricultural University), Sudarsono (Coordinator of Plant Biotechnology Division, Bogor Agricultural University), Sobir (PERIPI President 2012-2017), Muhamad Syukur (PERIPI President 2018-2022)

Editor:

Yudiwanti Wahyu, Desta Wirnas, Trikoesoemaningtyas, Arya Widura Ritonga
Siti Marwiyah

Published by:

PERIPI (Indonesian Breeding Science Society)
Department of Agronomy and Horticulture, Faculty of Agriculture, Bogor
Agricultural University, Jalan Meranti Kampus IPB Dramaga Bogor 16680, West
Java, Indonesia
Telp/Fax: +622516629348 e-mail: pperipi@yahoo.com

Publish online in PERIPI's website <http://peripi.org/>

ISBN 978-979-95503-7-8

© 2018, ALL RIGHT RESERVED

No part of this publication may be reproduced, store in a retrieval system, or by any means, electronic, mechanical or photocopying without the prior formal permission of the authors.

Foreword from the Chairman of the Organizing Committee

Rector of the Bogor Agricultural University, Dean of the Faculty of Agriculture, Distinguished Speakers, PERIPI members, honored guests, participants, audiences, good morning and good wishes to all of us.

The Indonesian Breeding Science Society (PERIPI) organized a National and International Seminar as well as PERIPI Congress on 2-3 October 2017 in Bogor with the theme "Sustainable Use of Genetic Resources for Productivity and Quality Improvement". The seminar and congress were held in collaboration with the Center for Tropical Horticulture Study, Bogor Agricultural University.

The objectives of this seminar and congress are to: (i) to bring together ideas on the role of genetic resources to improve productivity and quality, (ii) to present research results from PERIPI members to disseminate in the form of proceedings of seminars, (iii) to improve cooperation network among members PERIPI, and (iv) to consolidate the organization while strengthening cooperation with all stakeholders and beneficiaries.

Scientific papers are presented in oral or poster form for national seminars in Indonesian language or for international seminars in English language. All scientific papers presented are 236 consisting of 61 international oral papers, 28 international posters, 93 national oral papers, and 54 national posters. The scientific papers are grouped into 6 fields, i.e (1) Exploration, conservation, and characterization of plant genetic resources, (2) Increasing plant genetic diversity, (3) Development of superior varieties and plant strains, (4) Genomic studies and molecular-based plant breeding, (5) Seed technology, and (6) Animal breeding.

PERIPI annual meeting is attended by researchers, faculty and students from various universities and research institutes throughout Indonesia, the private sector and practitioners, policy makers and all stakeholders and beneficiaries who are interested and concerned in the field of breeding.

On behalf of the committee, please allow me to thank to the Center for Tropical Horticulture Study, Bogor Agricultural University, as a co-host, also to the Department of Agronomy and Horticulture, Faculty of Agriculture, Bogor Agricultural University. We also thank the sponsors: PT Alphasains, PT East West Seed Indonesia, PT BISI International Tbk., PT Sampoerna Agro Tbk., PT Astra Agro Lestari Tbk, and SABRAO regional secretariat of Indonesia, which has supported this event.

Congratulations seminars and congresses, good luck.

Bogor, October 2nd 2017

Chairman of the organizing committee

Dr Desta Wirnas

Welcoming Address from the President of PERIPI (Indonesian Breeding Science Society)

The Honorable Rector of Bogor Agricultural University, the Dean of the Faculty of Agriculture, Distinguished Speakers, dear Colleagues of PERIPI Regional Commissariats, Honorable Guests, Participants, Ladies and Gentlemen,

***Assalaamu'alaikum Warahmatullaahi Wabarakaatuh,
Good Morning***

We are indeed honored to have you here with us. Welcome to Bogor.

First of all let us give thanks to a loving and merciful God that today we are given health and happiness so that we can gather to attend National and International Seminar and PERIPI Congress 2017. This activity is one of the most important activity for PERIPI as the only society of breeding professions in Indonesia.

PERIPI was founded in 1976 by a number of breeders in a seminar in Lembang, Bandung. The year 2017 is the 8th PERIPI Congress. The purpose of PERIPI is to continuously improve breeding science in Indonesia. This means that PERIPI together with the Government and all stakeholders are involved in managing genetic resources, developing breeding science, fostering human resources, establishing the systems and regulations necessary for the advancement of breeding, as well as promoting the results of breeding to be useful for the community. Currently the number of PERIPI members is about ± 1000 people spread across Indonesia, which consists of researchers, academicians, practitioners, bureaucrats and observers. The members are organized in 18 Regional Commissariats.

Ladies and Gentlemen,

National and international seminars on the theme "Sustainable Use of genetic resources to improve productivity and quality" is very relevant to the condition of Indonesia and the world today. Optimal management of genetic resources is expected to respond to global challenges that are very dynamic as a result of climate change due to the influence of Greenhouse Gases (GHG) and free trade. It can be achieved, one of them, if a reliable seed and seed industry is built on the results of research using domestic genetic resources (SDG). Breeding based on local genetic potential is one way to produce high-adapted varieties in various environments.

In order to realize food security and overcome the threat of world food crisis, we must be able to increase productivity and production of agriculture, livestock and fisheries. One of the prerequisites to achieve this is the availability of competent human resources to develop superior varieties, superior fish lines and superior livestock that are productive, adaptive, tolerant to abiotic environmental stress and resistant to pests and diseases.

Breeders have been heavily involved in developing superior varieties, fish and livestock and have made a real contribution to improving national and world productivity and quality of life. The role of the breeders in realizing the green revolution and self-sufficiency of rice is unquestionable. The superior varieties

followed by the technology package have spared the world from starvation. Thus, the breeder is the front guard in overcoming the world food crisis.

In the future, the role of breeders will certainly be even greater, especially in realizing independence in seed / breeding to realize sustainable food sovereignty. Facing the nation's future challenges, the development of breeder human resources is essential. The quality of human resources can be improved through professional certification. The breeder's profession certification is conducted in order to apply the breeder's professional standard to demonstrate that the certificate holder is capable of performing a breeder's work. Thus, a breeding certification body should be established.

Honorable Guests, Ladies and Gentlemen,

As we have said before that one of the activities of PERIPI is to socialize the results of breeding to be useful for the community. Breeding results that have been done for years, with cost and energy that is not small, will be very wasteful if not introduced the community. This activity is part of the dissemination of the results of breeding research activities.

In addition to the seminar, another series of activities is the 8th PERIPI Congress. This Congress will elect the Chairman of PERIPI Period 2017-2021. Congress participants are representatives of 18 Regional Commissioners of PERIPI, representatives of the PERIPI Advisory Board and representatives of PERIPI Period 2013-2017.

We hope this seminar and congress will benefit all parties.

PERIPI would like to express special appreciation to the Center for Tropical Horticulture Studies, Bogor Agricultural University, as co-host, for the cooperation and contribution toward the commencement of this seminar.

We would like to express our thank and gratitude to our sponsors; PT. Alphasains, PT East West Seed Indonesia, PT. BISI Internasional Tbk., PT Sampoerna Agro Tbk., PT. Astra Agro Lestari Tbk, and SABRAO Regional Secretary for Indonesia, for their support. We hope to have a continued collaboration to strengthen breeding science in Indonesia.

To Dr Desta Wirnas, and the members of the organizing committee, I would like to thank you and congratulate on the commencement of this seminar. To all participants please use this opportunity to interact with each other to the full during this seminar and exchange your experience and create ideas for the future of plant breeding.

Bogor, October 2nd 2017

President of PERIPI
(Indonesian Breeding Science Society)

Professor Sobir

Table of Contents

Foreword from Chairman of The Organizing Committee	iii
Welcoming Address from the President of PERIPI	iv
Table of Contents	vi
List of Papers	vii
Schedule of the Seminar	x
The Committee	xi
List of Oral Presentation Titles	xiii
List of Poster Presentation Titles	xix
List of Participants	xxii

List of Papers

Exploration, Conservation, and Characterization of Plant Genetic Resources

- 01 Genetic Variability of Yield and Zn Content of IRRI Lines under Irrigated Low Land Condition in Indonesia
Untung Susanto, Wage Ratna Rohaeni, Umi Barokah,
Malikarjuna Swamy 1
- 02 Distribution Patterns of Iron (Fe) in Some Rice Tolerant and Sensitive Varieties
M Zulman Harja Utama, Widodo Haryoko, Sunadi 10
- 03 Golden Circle of Toba Lake: Richness of Local Rice
Cucu Gunarsih, Wage Ratna Rohaeni, Nani Yunani 17
- 04 Genetic Diversity and Relationship among Local Rice Accessions in District of Kampar, Riau Based on Morphological Characters
Isnaini, Isna Rahma Dini, Aslim Rasyad 35
- 05 Early Detection of Local Upland Rice Resistance to Drought
Sakka Samudin, Enny Adelina, Yusran 44
- 06 Characteristic of Rice Variety for Low Greenhouse Gases (GHGs) Emission in Facing the Challenges of Climate Change and National Food Security
Rina Kartikawati, Miranti Ariani, Anicetus Wihardjaka, Prihasto Setyanto 55
- 07 The Tolerance Level of Paddy to Low Nutrient Stress of Swamp Land
Novisrayani Kesmayanti* and Ruli Joko Purwanto 61
- 08 Development of Sorghum Core Collection Based on Phenotypic Traits in ICABIOGRAD Genebank
Andari Risliawati, Hakim Kurniawan, Mat Sohan, Nurul Hidayatun 70
- 09 Early Identification on the Genetic Diversity of Indonesian Butterfly Pea Accession as Colorant Food Based on Morphological Traits
Karuniawan A, TA Ulimaz, Kusumiyati, E Yulia, F Widiyantini, N Wicaksana, Dudi, T Suganda 78
- 10 Conservation of Indonesia Plant Genetic Resources for Food and Agriculture in ICABIOGRAD Gene Bank
Rina Kartikawati, Miranti Ariani, Anicetus Wihardjaka, Prihasto Setyanto 84

Enhancement of Plant Genetic Variability

- 11 Shoots Multiplication and Roots Induction of Valerian (*Valeriana officinalis* L.) In Vitro through Benzyl Amino Purin and Indol Butyric Acid Application
Sitti Fatimah Syahid 94

12	Early Population Development of Red Rice for Lodging Resistance Eries Dyah Mustikarini, Gigih Ibnu Prayoga, Kartika, Eka Darma Gati	101
13	Combining Drought Tolerance and Brown Planthopper Resistance Traits into Elite Rice Cultivars Targeting Rainfed Area Aris Hairmansis, Warsono, Yullianida, Trisnaningsih, Suwarno	113
14	Progeny Evaluation of Dura x Dura Crosses to be Utilized for Female Parents in Oil Palm (<i>Elaeis guinensis</i> Jacq.) Seed Production Burhanuddin Saragih, Aslim Rasyad, Herman	121
15	Adaptation of Low Land Red-Kernel Rice Inbred Lines Developed from Local Genetic Source in An Organic Upland Environment Saiful Hikam, Paul B. Timotiwu, Denny Sudrajat	128
16	In Vitro Culture of Mangosteen using Combination of Plant Growth Regulator and Organic Matter Adam Saepudin, Suhardjadinata	136
17	Variation of Morphological Characters on M ₂ Generation of Roselle (<i>Hibiscus sabdariffa</i> L.) Induced by Gamma Irradiation Amaluddin Syahputra, Diana Sofia Hanafiah, Emmy Harso Khardinata	148

Development of Crop Varieties and Livestock Breeding Lines

18	Leaf Bronzing Symptom Score as Related to Grain Yield of Rice under Iron Toxicity of Acid-Sulfate Soil Area Indrastuti Apri Rumanti, Rina Hapsari Wening, Trias Sitaresmi, Yudhistira Nugraha	154
19	The Application of Drough Index for Selection of Maize Families M Yasin HG, Musdalifah Isnaeni, NN Andayani, Sigit Budi Santoso	162
20	Response of Unpad Maize Genotype Tolerant Shade in Artificial Shade with Paranet (Shading net) Conditions Based on Tolerance Component Muhammad Syafi'i, Yuyun Yuwariah, Noladhi Wicaksana, Dedi Ruswandi	170
21	Correlation and Path Analysis of Baby Corn Characters in Field Corn and Sweet Corn Types Nailan Nabila, Yudiwanti Wahyu, Winarso Drajad Widodo	177
22	Variability of Yield Components and Grain Quality in Several Populations of Soybean (<i>Glycine max</i> (L.) Merrill) Aslim Rasyad, Adiwirman, Dewi Indriyani Roslim, Dian Rahmad	191
23	Performance of Peanuts (<i>Arachis hypogaea</i> L.) Lines from Selection of Transgressive Segregants Jose da Costa Ronald Freygen, Yudiwanti Wahyu, Asep Setiawan	199

- 24 Shuttle Breeding for Improvement of Wheat Adaptation to Tropical Agroecosystem
 Trikoesoemaningtyas, Azis Natawijaya, Mayasari Yamin, Yushi Mardiana, Jabal Rahmat Ashar, Amin Nur, Yudiwanti Wahyu 209

Genomic and Molecular Based Crop Breeding

- 25 Somaclonal Variation on the Pineapple In vitro Culture as Detected by Molecular Markers
 Riry Prihatini, Agus Sutanto, Yosy Zendra Joni, Sri Hadiati 216
- 26 Genetic Variability of Black Pepper (*Piper nigrum* L.) Putative Mutants Based on Morphology and SSR Markers
 Nurliani Bermawie, Nur Laela Wahyuni Meilawati, Agus Purwito, Natalini Nova Kristina 222

Seed Technology

- 27 The Effect Dosage Fungi Mychoriza Arbuskular (FMA) for Growing Some Genotipe Agarwood Plants (*Aquilaria* spp.) to Ready Release
 Benni Satria, Netti Herawati, and Aprisal 235
- 28 Food Colourings as Filming Material on Oil Palm Seeds and Germinated Seeds
 Mohamad Arif 249

Animal Breeding

- 29 Correlation of Polymorphism of Growth Hormone to the Pre-Weaning Saburai Goat Growth
 Sulastri, Siswanto, Kusuma Adhianto 254
- 30 Morphometric Characteristics of Etawah Grade Goat as A Female Population of Crossed Sapera Dairy Goat at IRIAP
 Anneke Anggraeni, Lisa Praharani 262
- 31 Improving Genetics Performance of Indonesian Local Duck
 Irma, Triana Susanti 271
- 32 Inheritance of Phenotypic Character on Hybrid Chicken F2 Derived from Crosses between ♀ F1 Kamper with ♂ F1 Kamper
 Isna Mustafiatul Ummah, Budi Setiadi Daryono 278

Schedule of the Seminar

International Seminar – Monday, 2 October 2017			
Time	Activity	Person - Title	Venue
08.00-09.00	Registration and Coffee Morning		Foyer
09.00-09.15	Welcoming Address	President of PERIPI (The Indonesian Breeding Science Society)	Ballroom 1
09.15-09.30	Opening Ceremony	Rector of Bogor Agricultural University	Ballroom 1
09.30-10.00	Keynote Speech	Prof Dr Bunjamin Tar'an, MSc (University of Saskachewan, Canada) <i>Genomic Studies in Germ Plasm Utilization</i>	Ballroom 1
Plenary Sessions			
10.00-10.20	Invited Speaker	Prof. Ghizan Bin Saleh (University of Putra Malaysia) <i>Utilization of Genetic Resources for Breeding of Vegetable Crops in Malaysia</i>	Ballroom 1
10.20-10.40	Invited Speaker	Ir Asep Harpenas (PT East West Seed Indonesia) <i>Germplasm Management for the Development of Horticultural Varieties Based on Consumer Preference</i>	
10.40-11.00	Invited Speaker	Prof Dr Sobir (Bogor Agricultural University) <i>Genetic Stability Analysis, Strategy for Climate Change Adaptation</i>	
11.00-11.30	Discussion	Moderator: Prof Dr Muladno	
11.30-12.00	Poster viewing		Ballroom 3
12.00-13.00	Lunch Break		Ballroom 3
13.00-14.00	Parallel Session I		Meeting rooms
14.00-15.00	Parallel Session II		Meeting rooms
15.00-15.30	Poster Session and Coffee Break		Ballroom 3
15.30-16.30	Parallel Session III		Meeting rooms
19.00-21.00	National Congress of PERIPI		TBA

The Committee

Steering Committee:

1. Prof Dr Sobir (The President of Indonesian Breeding Science Society - PERIPI)
2. Dr Ir Dwi Asmono (Director, PT Sampoerna Agro Tbk)
3. Prof Dr Ir Surjono Hadi Sutjahjo (Head of the Division of Genetic and Plant Breeding, Bogor Agricultural University)
4. Dr Ir Agus Purwito, MScAgr (Dean of the Faculty of Agriculture, Bogor Agricultural University)
5. Dr Ir Sugiyanta, MSi (Head of the Department of Agronomy and Horticulture, Bogor Agricultural University)
6. Dr Ir Darda Efendi, MSc (Director of Center for Tropical Horticulture Studies, Bogor Agricultural University)
7. Dr Ir Agung Karuniawan (Chairman of the West Java Regional Commissariat of PERIPI)

Scientific Committee:

1. Prof Muhammad Syukur (Bogor Agricultural University)
2. Prof Muladno (Bogor Agricultural University)
3. Prof Ismet Inounu (Indonesian Research Institute for Animal Production)
4. Prof Iskandar Zulkarnain (Bogor Agricultural University)
5. Prof Bambang S Purwoko (Bogor Agricultural University)
6. Prof Sudarsono (Bogor Agricultural University)
7. Dr Hajrial Aswidinnoor (Bogor Agricultural University)
8. Dr Alimudin (Bogor Agricultural University)

Organizing Committee:

Chairperson	: Desta Wirnas
Vice Chairperson	: Awang Maharijaya
Secretary	: Anggi Nindita
Treasurer	: Siti Marwiyah
Secretariat	: Ari Lia Wulandari M Roiyan Romadhon Tiara Yudilastari Abdul Hakim M Afarabi Istiqlal
Fund Raising and Sponsorship	: Asep Stiawan Syarifah Iis Aisyah

Hospitality	: Megayani Sri Rahayu Maryati Sari Juang Gema Kartika Pipit Werdiwati
Seminar Program	: Trikoesoemaningtyas Dewi Sukma Sulassih Hapidz Baidowi
Manuscript and Proceeding	: Yudiwanti Wahyu Darda Efendi Anneke Anggraeni Arya Widura Ritonga Shandra Amarilis
Web Manager and Publication	: Willy Bayuardi Kusuma Darma Saiful
Poster and Exhibition	: M Rahmad Suhartanto Ni Made Armini Wiendi Diny Dinarti Eka Septian Rahman
Competition of Poster and Oral Presentation	: Sintho W Ardie Ketty Suketi Adolf Pieter Lontoh Neni Rostini Bahagiawati Endang Gunawan
Accommodation and Logistics	: Hafith Furqoni Naekman Naibaho Nurwanita Ekasari Putri Iansyah Wibisono Bagas Akmal Putra Usamah Jaisurahman Rizki Anjal Heni Rusmiyati Tyas Arlianti Suryadi Daniel Jorex Momongan

List of Oral Presentation Titles

No	Authors	Title
O1-1	Edi Santosa, Maryati Sari, Adolf Pieter Lontoh, Ani Kurniawati	High Variation in Vegetative and Yield of <i>Amorphophallus muelleri</i> Blume (Araceae) Derived from Seed
O1-2	Rina Kartikawati, Miranti Ariani, Anicetus Wihardjaka, Prihasto Setyanto	Characteristic of Rice Variety for Low Greenhouse Gases (GHGs) Emission in Facing the Challenges of Climate Change and National Food Security
O1-3	Maria Stefanie Dwiyanti, Cheol Woo Park, Jun Abe	Genetic Analysis Underlying High Alpha-Tocopherol Content in Wild Soybean
O1-4	Rizki Anjal Puji Nugroho, Muhamad Syukur, Willy Bayuardi Suwarno	Genetic Modeling in Shape and Color of Kernel trough Quantitative and Qualitative Method in Crossing between Sweet Corn and Flint Corn
O1-5	Sakka Samudin, Enny Adelina, Yusran	Early Detection of Local Upland Rice Resistance to Drought
O1-6	Isnaini, Isna Rahma Dini, Aslim Rasyad	Genetic Diversity and Relationship Among Local Rice Accessions in Regency of Kampar, Riau Based on Morphological Characters
O1-7	Andari Risliawati, Hakim Kurniawan, Mat Sohan, Nurul Hidayatun	Development of Sorghum Core Collection Based on Phenotypic Traits in IAARD Genebank
O1-8	Sesilia Anita Wanget, Neni Rostini, Agung Karuniawan, Sugijono Moeljopawiro	Genetic Diversity of Local Groundnut Varieties Based on Agronomic Characters
O1-9	Azri Kusuma Dewi, Ita Dwimahyani, Reflinur	Characteristic of Kewal Local Rice Mutant Lines to Yield and Yield Components and Their Genetic Relationships Using STS Markers
O1-10	Niken Trisnaningrum	Exploration and Characterization of Local Rice Varieties in Ponorogo for Developing Early Flowering Time Variety
O1-11	Agung Karuniawan, TA Ulimaz, Kusumiyati, E Yulia, F Widiyanti, N Wicaksana, Dudi, T Suganda	Early Identification on the Genetic Diversity of Indonesian Butterfly Pea Accession as Colorant Food Based on Morphological Traits
O1-12	Dyra Haryanti, Darda Efendi, Sobir	Morphological Diversity of Several Cauliflower (<i>Brassica oleracea</i> var. <i>botrytis</i> L.) Genotypes in the Highland and Lowland

No	Authors	Title
O1-13	Nurul Hidayatun, Andari Risliawati, Hakim Kurniawan, Minantyorini, Nurwita Dewi	Conservation of Indonesia Plant Genetic Resources for Food and Agriculture in ICABIOGRAD Gene Bank
O1-14	Yudithia Maxiselly, Intan Ratna Dewi Anjar Sari, Ade Ismail, Syariful Mubarak, Titis Kurniawan, Debby Ustari ³ , Haris Maulana	Distribution Pattern of Jengkol Plant (<i>Pithecellobium jiringa</i> (Jack) Prain) Based on Morphological Trait to Develop Natural Medicine for Diabetes Mellitus in Sumedang, West Java
O1-15	Neni Rostini, Susenon Amien, Meddy Rachmadi, Noladhi Wicaksana, Ranthi Whesi Umbarani, Pustaka Raih, Anisa Karunia Ramadan	Parents Selection for High Yield and Anthracnose Disease Resistance Chili Pepper Breeding
O1-16	Novisrayani Kesmayanti	Low Nutrient Tolerance Limit Identification and <i>Jatropha</i> Selection for Optimization of Revegetation of Post Coal-mining land
O2-17	Saiful Hikam, Paul B. Timotiwu, Denny Sudrajat	The Adaptation of Lowland Red-Kernel Rice Inbred Lines Developed from Local Genetic Source in an Organic Upland Environment
O2-18	Efendi, Bakhtiar, Sabaruddin Zakaria, Lukman Hakim	Evaluation of F3 Green Super Rice Performances that Crossed from Local Rice Sikuneng with IRBB27
O2-19	Etti Swasti	Phenotypic Appearance of Segregating F2 Populations Derived from Local Red Rice Crosses in West Sumatera
O2-20	Muhammad Tahir	Cytological Effect and Morphological Variability of MV2 Patchouli Plants (<i>Pogostemon cablin</i> Benth.) Derived from Gamma Ray-Irradiation
O2-21	Sitti Fatimah Syahid	Shoots Multiplication and Roots Induction of Valerian (<i>Valeriana officinalis</i> L.) In Vitro through Benzyl Amino Purine and Indol Butyric Acid Application
O2-22	Aris Hairmansis, Warsono, Yullianida, Trisnaningsih, Suwarno	Combining Drought Tolerance and Brown Plant Hopper Resistance Traits into Elite Rice Cultivars Targeting Rainfed Area
O2-24	Iswari Saraswati Dewi, Yudia Azmi, Bambang Sapta Purwoko, Muhamad Syukur, Tintin Suhartini	Evaluation of Dihaploid Black Rice Lines-Derived Anther Culture

No	Authors	Title
02-25	Anggi Nindita, Faradila Median R, Surjono Hadi Sutjahjo, Hajrial Aswidinoor, Desta Wirnas	F2 Population Diversity of Rice (<i>Oryza sativa</i> L.) on High Temperature Stress Condition
02-26	Totok Agung Dwi Haryanto	Phenotypic Response to Ratoon Technology of Rainfed Rice
02-27	Uma Rani Sinniah, Jaafar Juju Nakasha, Noor Azmi Shaharuddin, Sreeramanan Subramaniam, Mallappa Kumara Swamy	Safed Musli (<i>Chlorophytum borivilianum</i>) Hairy Root Culture as Effected by the Carbon and Light Sources
02-28	Naharudin NS, Maizura AS, Saleh G	Presence of Putative QTL-Markers Associated with Biomass Yield in Selected Forage Maize Inbred Lines
02-29	Gina Pikana, Willy Bayuardi, Anggi Nindita, Hajrial Aswidinnoor	Effect of Nitrogen and Silica on Panicle Morphology of Five Rice Genotypes
02-30	Dwi Wahyuni Ganefianti	Combining Ability Analysis of Growth and Yield Performances of Chili Pepper Derived from a Complete Diallel Scheme Across Environments
02-31	Darmawan Saptadi, Fendy Bayu Firmansyah, Noer Rahmi Ardiarini, Budi Waluyo	Variability and Heritability of Bambara Groundnut for Polyploidization
02-32	Rosmaina	Response of Chili Pepper (<i>Capsicum annuum</i> L) to Heat Stress at Flowering Phase
02-33	Darda Efendi, Muhammad Rahmat Suhartanto, Sulassih, M Syukur	Association Variables Genetic Papaya (<i>Carica papaya</i>) on the Third (F3) Population
02-34	Yudiwanti Wahyu, Rivani Hilalullaili, Yuliawati	Quatitive Characters Evaluation of Bambara Groundnut (<i>Vigna subterranea</i> L.) Lines Derived from Pure Line Selection of Sukabumi Landrace
03-35	Bambang S Purwoko, Iswari Saraswati Dewi, Sugiyanta, Anggi Nindita	Productivity of Doubled Haploid Upland Rice Lines Derived from Anther Culture at Three Locations
03-36	Trias Sitaresmi Indrastuti Apri Rumanti, Rina Hapsari Wening, Yudhistira Nugraha	Leaf Bronzing Symptom Score as Related to Grain Yield of Rice under Iron Toxicity of Acid-Sulfate Soil Area

No	Authors	Title
O3-37	Trikoesoemaningtyas, Azis Natawijaya, Mayasari Yamin, Yushi Mardiana, Jabal Rahmat Ashar, Amin Nur, Yudiwanti Wahyu	Shuttle Breeding for Improvement of Wheat Adaptation to Tropical Agroecosystem
O3-38	Nailan Nabila, Yudiwanti Wahyu, Winarso Drajat Widodo	Correlation and Path Analysis of Baby Corn Traits in Field Corn and Sweet Corn Types
O3-39	Untung Susanto	Adaptability of Rice Lines for Early and Late Rainy Season of Rainfed Lowland Agro-ecosystem in Pati
O3-40	Akhmad Hidayatullah, Bambang S Purwoko, Iswari S Dewi, Willy B Suwarno	Advanced Yield Trial of Doubled Haploid Lines of Lowland Rice in Three Locations
O3-41	Willy B. Suwarno, Hajrial Aswidinnoor, Sobir, Muhamad Syukur, Trias Sitaresmi	PBSTAT-GE: a simple, comprehensive tool for stability analysis in plant breeding
O3-42	Angelita Puji Lestari, Aris Hairmansis, Rini Hermanasari, Yullianida, Suwarno	Selection of Upland Rice on Observation Experiment in Kebumen, Central Java
O3-43	Jose da Costa Ronald Freygen, Yudiwanti Wahyu, Asep Setiawan	Performance of F5 Generation Lines Results from Transgressive Segregation Selection on Peanuts (<i>Arachis hypogea</i> L.)
O3-44	Nurul Khumaida, Sintho W. Ardie, AR Hamonangan Siregar, Muhamad Syukur	Growth and Yield Evaluation of Gamma Irradiation Generated Cassava Mutants at M1V5 Generation
O3-45	Sri Hartatik, Miswar, Tirto Wahyu Widodo	Performance of Sugarcane (<i>Saccharum officinarum</i> L.) Mutation Plant by Ethyl Methane Sulphonate (EMS) at Several Doses of Nitrogen Application
O4-46	Ahmad Fathoni, Ima M Zainuddin, Hervé Vanderschuren, Enny Sudarmonowati, Rod Scott, John R Beeching	Over-Expression of A Scopolin-Beta-Glucosidase in Cassava Reduces Scopoletin Accumulation and Delays Postharvest Root Deterioration
O4-47	Jakty Kusuma	Genetic Diversity and Population Structure of Cultivated and Domesticated Cotton Accessions from Three Different Species as Revealed by SSR Markers

No	Authors	Title
O4-48	Azis Natawijaya, Sintho W Ardie, Muhamad Syukur, Alex Hartana, Ismail Maskromo, Sudarsono	Genetic Differentiation between Oil Palm Species and Identification of Species Specific Marker for Monitoring Introgression
O4-49	Mondjeli Constantin, Ardha Apriyanto, Sobir Ridwani, Muhamad Syukur, Willy Bayuardi Suwarno	Genome Wide Association Study revealed SNPs markers for Oil Palm Vegetative Characters in Wide Population of Cameroon
O4-50	Marlin, Agus Purwito, Awang Maharijaya, Sobir	Identification on Molecular Diversity Related to Flowering Gene (LEAFY) in 5 Shallot (<i>Allium cepa</i> var. <i>aggregatum</i>) Local Genotypes
O4-51	Dewi Sukma	PTO Catalytic Domain Characterization, SNAP Marker Development, and Phalaenopsis Genetic Diversity Analysis
O4-52	Dadang Sumardi, Rijanti Rahaju Maulani, Budi Waluyo, Husna Nugrahapraja, Agung Karuniawan, Tati Suryati Syamsudin, Adi Pancoro	The Expression of IFS1 and IFS2 Genes in Black Soybean Seed Growing at Different Altitude
O5-53	Fajrilla Akhirta Marsya, M Rahmad Suhartanto, Endah Retno Palupi, Sulassih	Performance and Seed Quality of IPB 11 Papaya Genotype (<i>Carica papaya</i> L.) in Pasir Kuda and Pasir Sarongge Experimental Field
O5-54	Eko Pramono, M. Kamal, FX Susilo, PB Timotiwu	Seed Resistance Of Various Genotypes Of Sorghum (<i>Sorghum Bicolor</i> [L.] Moench.) On Weevil (<i>Sitophilus</i> Sp.) During Storage
O5-55	Endah Retno Palupi, Umi Salamah, Anas Dinurrohman Susila	Storage Behavior of Basil (<i>Ocimum tenuiflorum</i>) Seed in Various Conditions
O6-56	Adisti Rastosari, Sumadi, Tety Hartatik	Repeatability for Yearling Heart Girth, Yearling Body Length, Yearling Shoulder Height of Brahman Cattle
O6-57	A. Anggraeni, B Tiesnamurti, Chalid Talib, Erik Andreas	Genetic Polymorphisms of OPN and IGF1 Genes in Crossbred Ongole Grade Cattle Based on Birth Type and Location in Central Java
O6-58	Aditya Nur Subchan, Budi Setiadi Daryono	Inheritance of Phenotype Character and Growth on Hybrid Chicken (<i>Gallus gallus domesticus</i> , Linn. 1758) BC1 Derived from Crosses Between ♀ Pelung Chicken With ♂ F1 Chicken

No	Authors	Title
O6-59	Isna Mustafiatul Ummah, Budi Setiadi Daryono	Inheritance of Phenotypic Character on Hybrid Chicken (<i>Gallus gallus gallus</i> , Linn.1758) F2 Derived From Crosses Between ♀ F1 Kamper with ♂ F1 Kamper
O6-60	Utin Elsa Puspita	The Inheritance of Feather Colors of Pelung Chicken
O6-61	Sulastri, Siswanto, Kusuma Adhianto	The Correlation of Polymorphism of Growth Hormone to the Pre-Weaning Saburai Goat Growth

List of Poster Presentation Titles

No	Authors	Title
P1-1	Eva Sartini Bayu, Diana Sofia Hanafiah, Hani Maura Tiarli	Study of Stomatal Characterization of Gandarusa (<i>Garcinia atroviridis</i> Griff ex T. Anders) Genotypes in Seedling Stage
P1-2	Nafisah	Bacterial Leaf Blight Resistance and Agronomic Trait Performance of Indonesian High Yielding Rice Varieties
P1-3	Wage Ratna Rohaeni	Golden Circle of Toba Lake: Rich of Potensial Local Paddy
P1-4	Untung Susanto, Wage R Rohaeni, Umi Barokah, Malikarjuna Swamy	Genetic Variability of Yield, Zn Content of IRRI Lines under Irrigated Lowland Condition in Indonesia, Case of Kebumen, Central Java, Indonesia
P1-5	Sabaruddin Zakaria, Bakhtiar Basyah, Farid Fitriya, Trisda Kurniawan, Agam Ihsan Hereri, Teuku Maulana	The Growth and Productivity of Native Indonesian Rice Progenies and Its Relationship with Root Development During Dry-Season
P1-6	Upit Sarimana, Agry Pradipta, Javier Herrero, Fahmi Wendra, Zulhermana S, Dwi Asmono	Genetic Diversity of Oil Palm from Cameroon Exploration at PT. Binasawit Makmur
P1-7	Sherly Rahayu, Willy Bayuardi Suwarno, Munif Ghulamahdi, Hajrial Aswidinnoor	Responses of Panicle Morphology Traits of Rice (<i>Oryza sativa</i> L) as Affected by Nitrogen Fertilizer
P2-8	Amaluddin Syahputra, Diana Sofia Hanafiah, Emmy Harso Khardinata	Variations of Morphological Characters on M2 Generation of Roselle (<i>Hibiscus sabdariffa</i> L.) Induced by Gamma Irradiation
P2-9	Estria Furry Pramudyawardani, Holden Verdeprado, Hajrial Aswidinnoor, Bambang Sapta Purwoko, Willy Bayuardi Suwarno, Bertrand CY Collard	Heritability Estimation and Selection on Segregated Generation for Agronomical Characters, Yield Components, and Yield
P2-10	Armandina Marçal, William Erskine, Janine Croser, Federico Ribalta	Towards Accelerated Single-seed-descent in Mungbean (<i>Vigna radiata</i> L.)

No	Authors	Title
P2-11	Muhammad Ridha Alfarabi Istiqlal, Muhamad Syukur, Yudiwanti Wahyu	Genetic Variability and Selection Criteria of Quantitative Traits of Chili (<i>Capsicum annuum</i> L.) at Two Locations
P2-12	Khairunnisa Lubis, Anthonius Ketaren, Diana Sofia Hanafiah	Performance of Vegetative And Generative Characters of The Maize F1 Population Applied with Organic Material in Acidic Soil
P2-13	Jorex Daniel Momongan, Trikoesoemaningtyas, Desta Wirnas, Didy Sopandie	Selection Of Sorghum (<i>Sorghum bicolor</i> (L.) Moench) Lines for P Deficiency Tolerance
P3-14	Ainun Toyibatul Hidayah, Suryadi, Trikoesoemaningtyas, Siti Marwiyah, Desta Wirnas	The Effect of Genotype x Environment Interactions on Pod Shattering of IPB Soybeans Advanced Lines
P4-15	Yuliasti	Genetic Diversity of Soybean Mutant Lines using SSR Markers and Evaluation of Grain Yield under Dry Land
P4-16	Hari Perdanaputra, Boy Valenza Damiri, Rahman Awaludin, Asteria Pitasari, Sandi Arya Rumintang, Masrukhin, Nugraheni Vita Rachma, Muryanto, Ramadhani Safitri, Asep Harpenas	The Application of Molecular Markers in Development of Highland Tomato Lines Resistant to Bacterial Wild and Gemini Virus
P4-17	Lukita Eddy, Indah Anita-Sari, Tengku Imam Saputra, Sobir	Molecular Marker of Indonesian Fine Cocoa Based on MYB Gene
P4-18	Riry Prihatini, Agus Sutanto, Yosy Zendra Joni, Sri Hadiati	Somaclonal Variation on The Pineapple <i>In vitro</i> Culture as Detected by Molecular Markers
P5-19	Nurliani Bermawie, Nur Laela Wahyuni Meilawati, Agus Purwito, Natalini Nova Kristina	Genetic Diversity of Putative Mutant Pepper (<i>Piper nigrum</i> L.) Ciinten Variety Based on Morphology and SSR Marker
P5-20	Mohamad Arif	Food Colourings as Filming Material on Oil Palm Seeds and Germinated Seeds
P5-21	Apri Sulisty, Nisrina Saraswati Reza, Purwantoro, Kurnia Paramita Sari	The Estimation of Genetic Parameters of Soybean Seed Characteristics

No	Authors	Title
P5-22	Rismawita Sinaga	Effect Of Varieties and Storage Periods of Shallot Seeds (<i>Allium ascalonicum</i> L.) on the Seed Growth and Production in High Land
P5-23	Edi Santosa, Herdhata Agusta, Dwi Gunoro, Sofyan Zaman	Static Strength of Ciherang Variety from Two Different Planting Distances: a Field Simulation for Strong Wind Stress
P5-24	Astiti Rahayu, Eti Heni Krestini, Chotimatul Azmi	Effect of NaOCl concentration to var. Ciko Chili Seed Quality
P5-25	Astiti Rahayu, Nurmalita Waluyo, Rismawita Sinaga	Quality Assessment of Chili Seed (<i>Capsicum annuum</i> L.) Var. Linga on Save Space and the Save Period
P6-26	Anneke Anggraeni	Morphometric Characteristics of Etawah Grade Goat as a Female Population of Crossed Sapera Dairy Goat at IRIAP
P6-27	Slamet Diah Volkandari, Endang Tri Margawati, Indriawati	Phylogenetic Tree of Bali cattle Based on Sex Determining Region-Y (SRY) gene
P6-28	Irma, Triana Susanti	Improving Genetics Performance of Indonesian Local Duck

List of Participants

Name	Affiliation	e-mail
Abu Hanifah	Bogor Agricultural University, Indonesia	abuhanifah.jbr@gmail.com
Adam Saepudin	Siliwangi University, Indonesia	saepudinadam@yahoo.com
Adisti Rastosari	Tulang Bawang University, Lampung, Indonesia	adisti.rastosari@gmail.com
Aditya Nur Subchan	Gadjah Mada University, Indonesia	aditya.nursubchan@gmail.com
Agung Karuniawan	Padjadjaran University, Indonesia	agung.karuniawan@unpad.ac.id
Agus Rachmat	LIPI Biotechnology Research Center, Indonesia	guess_btk@yahoo.com
Ahmad Fathoni	University of Bath, United Kingdom	ahmad.fathoni1737@gmail.com
Akhmad Hidayatullah	Bogor Agricultural University, Indonesia	akhmad_hidayatullah89@yahoo.com
Ainun Toyibatul Hidayah	Bogor Agricultural University, Indonesia	ainuunt@gmail.com
Andari Risliawati	Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development (ICABIOGRAD)	boendar@yahoo.co.id
Anggi Nindita	Bogor Agricultural University, Indonesia	angginindita@yahoo.com
Anneke Anggraeni	Indonesian Research Institute for Animal Production	ria.anneke@yahoo.co.id
Apri Sulistyو	Indonesian Legumes and Tuber Crops Research Institute	apri.sulistyo@gmail.com
Aris Hairmansis	Indonesian Center for Rice Research (ICRR)	a.hairmansis@gmail.com
Armandina Marçal	Ministry of Agriculture and Fisheries Timor Leste	dina.pesquizatl@gmail.com
Azis Natawijaya	Mekarsari Fruit Garden, Indonesia	aznatawijaya@yahoo.com
Azri Kusuma Dewi	Center for Isotopes and Radiation Application BATAN	azridewi@yahoo.com
Aslim Rasyad	Riau University, Indonesia	aslim.rasyad@gmail.com
Bambang S. Purwoko	Bogor Agricultural University, Indonesia	bambangpurwoko@gmail.com

Name	Affiliation	e-mail
Burhanuddin Saragih	Minamas Research Centre	burhanuddin.saragih@simedarby.com
Dadang Sumardi	Bandung Institute of Technology, Indonesia	dadangsu@sith.itb.ac.id
Darda Efendi	Bogor Agricultural University, Indonesia	dardaefendi@yahoo.com
Darmawan Saptadi	Brawijaya University, Indonesia	darmawansaptadi@gmail.com
Desti Wirnas	Bogor Agricultural University, Indonesia	dwirnas@gmail.com
Dewi Sukma	Bogor Agricultural University, Indonesia	dsukma70@gmail.com
Diana Sofia Hanafiah	Sumatera Utara University, Medan, Indonesia	dedek.hanafiah@yahoo.co.id
Dwi Wahyuni Ganefianti	Bengkulu University, Indonesia	dw_ganefianti@unib.ac.id
Dyra Haryanti	Bogor Agricultural University, Indonesia	dardaefendi@gmail.com
Edi Santosa	Bogor Agricultural University, Indonesia	edisang@gmail.com
Efendi	Syah Kuala University, Aceh, Indonesia	efendi123@unsyah.ac.id
Eka Septhian Rachman	Bogor Agricultural University, Indonesia	ekasepthian@icloud.com
Eko Pramono	Lampung University, Indonesia	pramono.e61@gmail.com
Endah Retno Palupi	Bogor Agricultural University, Indonesia	erpalupi@yahoo.com
Estria Furry Pramudyawardani	Bogor Agricultural University, Indonesia	pramudyawardani@gmail.com
Etti Swasti	Andalas University, Padang, Indonesia	ettiswasti@yahoo.com
Eva Sartini Bayu	Sumatera Utara University, Medan, Indonesia	tinigirsang@yahoo.com
Gina Pikana	Bogor Agricultural University, Indonesia	gina.pikana@gmail.com
Hari Perdanaputra	PT East West Seed Indonesia	hari.perdana@panahmerah.id

Name	Affiliation	e-mail
Indrastuti A. Rahmaini	Indonesian Center for Rice Research (ICRR)	indrastuti_apri@yahoo.com
Irma	Directorate General of Animal Husbandry and Animal Health, Ministry of Agriculture	irma_fapetipb@yahoo.co.id
Isna Mustafiatul Ummah	Gadjah Mada University, Indonesia	isna.ummah@yahoo.co.id
Isnaini	Department of Agrotechnology, Faculty of Agriculture, Riau University, Pekanbaru, Indonesia	isnaini.bakrie@gmail.com
Iswari Saraswati Dewi	Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development (ICABIOGRAD)	iswari.dewi01@gmail.com
Jaafar Juju Nakasha	Universiti Putra Malaysia	jujunakasha@upm.edu.my
Jakty Kusuma	State Politechnic of Lampung, Indonesia	kusuma@polinela.ac.id
Jose da Costa Ronald F	Bogor Agricultural University, Indonesia	yudiwanti@apps.ipb.ac.id
Maria Stefanie Dwiyanti	Hokkaido University, Japan	dwiyanti@abs.agr.hokudai.ac.jp
Mohamad Arif	Indonesian Oil Palm Research Center	mohamad_albatavi@.com
Monjeli Constantine	Bogor Agricultural University, Indonesia	c.mondjeli@yahoo.fr
Muhammad Syafi'i	Singaperbangsa University, Karawang, Indonesia	muhammad.syafii@staff.unsika.ac.id
Muhammad Tahir	State Politechnic of Lampung, Indonesia	tahir@polinela.ac.id
Nafisah	Indonesian Center for Rice Research (ICRR)	n.nafisah143@gmail.com
Nailan Nabila	Bogor Agricultural University, Indonesia	nailannabila@gmail.com
Nazatul Shima	Universitas Putra Malaysia	shima.naharudin@gmail.com
Neni Rostini	Padjadjaran University, Bandung, Indonesia	nenithamrin@yahoo.com
Niken Trisnaningrum	Gontor Darussalam University, Ponorogo, Indonesia	niken.trisnaningrum@unida.gontor.ac.id
Novisrayani Kesmayanti	IBA University, Palembang, Indonesia	noviekesmayanti@yahoo.co.id

Name	Affiliation	e-mail
Nurliani Bermawie	Indonesian Spice and Medicinal Crops Research Institute	nurliani.bermawie@gmail.com
Nurul Hidayatun	Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development (ICABIOGRAD)	nurulhi23@yahoo.com
Rina Kartikawati	Indonesian Agricultural Environmental Research Center	rinak_iaeri@yahoo.com
Riry Prihatini	Indonesian Tropical Fruit Research Center	riry_silva@yahoo.com
Rismawita Sinaga	Indonesian Vegetable Crops Research Institute	rismawitasinaga@yahoo.com
Rizki Anjal Puji Nugroho	Bogor Agricultural University, Indonesia	anjal.agh48@gmail.com
Sabaruddin Zakaria	Syiah Kuala University, Aceh, Indonesia	zaksabar@unsyiah.ac.id
Saiful Hikam	Lampung University, Indonesia	s_hikam@yahoo.com
Sakka Samudin	Tadulako University, Palu, Indonesia	sakka01@yahoo.com
Sesilia Anita Wanget	Sam Ratulangi University, Manado, Indonesia	sesilia_wanget@yahoo.com
Sitti Fatimah Syahid	Indonesian Spice and Medicinal Crops Research Institute	ifa_sy@yahoo.co.id
Sulastri	Lampung University, Indonesia	kusuma.adhianto@fpunila.ac.id
Tita Kartika Dewi	Indonesian Center for Rice Research (ICRR)	untungsus2011@gmail.com
Totok Agung Dwi Haryanto	Jenderal Soedirman University, Purwokerto, Indonesia	totokadh@yahoo.com
Trias Sitaresmi	Indonesian Center for Rice Research (ICRR)	sitares_trias@yahoo.com
Trikoesoemaningtyas	Bogor Agricultural University, Indonesia	trikadytia@gmail.com
Untung Susanto	Indonesian Center for Rice Research (ICRR)	untungsus2011@gmail.com
Utin Elsy Puspita	Gajah Mada University, Yogyakarta, Indonesia	utinelsya@yahoo.com
Wage Ratna Rohaeni	Indonesian Center for Rice Research (ICRR)	wagebbpadi@gmail.com
Willy B. Suwarno	Bogor Agricultural University, Indonesia	bayuardi@gmail.com

Name	Affiliation	e-mail
Yudithia Maxiselly	Padjadjaran University, Bandung, Indonesia	yudithia.maxiselly@ unpad.ac.id
Yudiwanti Wahyu	Bogor Agricultural University, Indonesia	yudiwanti@apps.ipb.ac. id
Yuliasti	Center for Isotopes and Radiation Application BATAN, Indonesia	yuliasti@batan.go.id