

23<sup>rd</sup>  
**International  
Conference  
on Coffee  
Science**

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**Bali, Indonesia  
October 3-8, 2010**



*Editor / Editeur*  
Association for Science and Information on Coffee (ASIC)

*Made by*  
Cogito (www.cogitoweb.it)

**23<sup>rd</sup> International Conference on Coffee Science  
Bali (Indonesia), 3<sup>th</sup> – 8<sup>th</sup> October 2010**

**23<sup>ème</sup> Colloque Scientifique International sur le Café  
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- Coffee and the Environment. A Review

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- Characterization of Coffea arabica MADS-Box Gene Family

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- Coffee Processing Water Minimization Options

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## Genomics & Genetics

---

### Communications

- Expression Analysis and Nucleic Polymorphism of Candidate Genes for Drought Tolerance in Coffee  
*Freire, L., Vieira, N., Vinecky, F., Alves, G., Leroy, T., Pot, D., Elbelt, S., Marques, T., Rodrigues, G., Marraccini, P., Andrade, A. (Brazil)*
- MOCCADB - An Integrative Database for Functional, Comparative and Diversity Studies in the Rubiaceae Family  
*Poncet, V., Plechakova, O., Benedet, F., Cuyot, R., Couderc, M., De Block, P., Hamon, P., Campa, C., de Kochko, A., Hamon, S., Tranchant-Dubreuil, C. (France)*
- A Coffee High Density Genetic Map for Quantitative Trait Loci Analysis on Agronomical, Technological and Biochemical Characteristics in Robusta and Arabica  
*Crouzillat, D., Rigoreau, M., Lefebvre-Pautigny, F., Priyono, Broun, P., Lambot, C. (France)*
- Functional Markers in Assisted Selection – Study of an Expressed SSR Locus Associated with Leaf-Miner Resistance  
*Molino, J., Silvestrini, M., Martinati, J., Guerreiro-Filho, O., Maluf, M. P. (Brazil)*
- Sequencing the Coffee Genome: Overall Strategy and Progress Made in the Frame of ICGN  
*Lashermes, P., Argout., Y., Crouzillat, D., Priyono, Yepes, M., Wincker, P. (France)*
- Overview of the Functional Virulent Genome of the Coffee Leaf Rust Pathogen *Hemileia vastatrix*  
*Talhinhas, P., Azinheira, H. G., Loureiro, A., Batista, D., Vieira, B., Pina- Martins, F., Tisserant, E., Petitot, A.S., Paulo, O.S., Duplessis, S., Silva, M. d. C., Fernandez, D. (Portugal)*

## **Short communications**

- Molecular Genetic Diversity of Arabica Coffee (*Coffea arabica* L.) Using ssr Markers  
*Alemayehu, T., Pétiard, V., Broun, P., Crouzillat, D. (Ethiopia)*
- The Effect of Low Temperature on Metabolism of Membrane Lipids in *Coffea* spp. and Associated Gene Expression  
*Batista-Santos, P., Goulao, L.F., Fortunato, A.S., Pais, I.P., Campos, P.S., Partelli, F., Ribeiro, A.I., Ramalho, J.C. (Portugal)*
- Coffee Control Quality on Geographic and Genetic Origins Determined By DNA Traceability  
*Morel, E., Rigoreau, M., Rodriguez, A., Lambot, C., Broun, P., Crouzillat, D. (France)*
- Coffee Seeds Gene Expression Analysis in Different Post-Harvest Processes  
*Modonut, M., Del Terra, L., Barnaba, M., Graziosi, G., Pallavicini, A. (Italy)*
- Screening of SSR Markers for Diversity Studies in *Coffea arabica*  
*Dos Santos, M., Ferreira, R., Sera, T., Pot, D., Pereira, L.F., Charmetant, P., (Brazil)*

## **Labels – Quality - Breeding**

---

### **Communications**

- Quality Upgrading in Specialty Coffee Chains and Smallholder Livelihoods in Eastern Indonesia: Opportunities and Challenges  
*Neilson, J., Arifin, B., Fujita, Y., Hartatri, D.F.S. (Australia)*
- Evaluation of Organic Coffee Farming Potential from Perspectives of Production and Natural Resources Management in Yayu District, Southwestern Ethiopia  
*Tesfaye, A., Bobe, B., Ketema, B. (Ethiopia)*
- Sustainable Coffee Farming Framework: a Chain View  
*Celi, G., Liverman, D., (Italy)*
- Performance of *Coffea arabica* F1 Hybrids in Comparison with American Pure Line Varieties  
*Bertrand, B., Alpizar E., Llara L., Santacreo R., Hidalgo M., Quijano J.M., Charmetant P., Montagnon C., Georget F., Etienne, H. (France)*
- An Example of Successful Technology Transfer: *Coffea arabica* Propagation by Somatic Embryogenesis  
*Georget, F., Bertrand B., Malo, E., Montagnon, C., Alpizar, E., Dechamp, E., Jourdan, I., Etienne, H. (France)*
- The Impact of Participatory Village Based Training for Increased Coffee Productivity, Production and Income in Tanzania  
*Magesa, J.M., Swai, F.B., Mushi, I.K., Ng'Homa, N.M., Mdemu, S., Teri, J.M. (Tanzania)*

## Coffee Agronomy. Pathology - Breeding

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### Communications

- Integrated Control of Coffee Berry Borer (*Hypothenemus hampei*) on Arabica Coffee in South Sulawesi, Indonesia  
*Wiryadiputra, S., Jahuddin, R., Mainsese, I.L., Oduor, G.I., Sastroutomo, S.S. (Indonesia)*
- Nematodes: an Emerging Constraint to Coffee Production in Kenya  
*Gichuru, E., Maundu, J.N., Mugo, H.M., Mburu, J.N., Gitonga, K.T., Kimenju, J.W., Mutua, G.K. (Kenya)*
- Population Structure of *Colletotrichum kahawae*, the Causal Agent of Coffee Berry Disease (CBD): Insights from a Multi-Locus Approach  
*Silva, D., Talhinhos, P., Várzea, V., Loureiro, A., Silva, M.d.C., Paulo, O.S., Batista, D. (Portugal)*
- The Regional Coffee Wilt Programme: Where Do We Go from Here?  
*Phiri, N., Baker, P., Rutherford, M., Flood, J., Musoli, P., Mbuyid, K., Kilambo, D., Adugna, G., Hakiza, G., Pinard, F., Oduor, G. (Kenya)*
- Progress in Breeding for Resistance to Coffee Wilt Disease (Tracheomyces) in Tanzania  
*Kilambo, D., Ng'homa, N.M., Mtenga, D.J., Teri, J.M., Phiri, N. (Tanzania)*
- Nematode Diversity after Forest Conversion into Coffee-Based Agroecosystems  
*Gede Swibawa, I., Hairiah, K., Suprayogo, D. (Indonesia)*

### Short communications

- The Raise of Eco-Label Coffee: a Comparative Study of Their Effects on Costa Rican and Kenyan Cooperative Coffee Sector  
*Le Coq, J.F., Pinard, F., Kirimba, E.G., Soto, G. (France)*
- Comparative Analysis of Coffee Eco-Certification Initiatives  
*Pinard, F., Kirimba, E. (Kenya)*
- The CAFNET/Coffee-Flux Project: Evaluating Water, Carbon and Sediment Ecosystem Services in a Coffee Agroforestry Watershed of Costa Rica  
*Roupsard, O., Gomez-Delgado, F., Charbonnier, F., Benegas, L., Taugourdeau, S., Kinoshita, R., Moussa, R., Dreyer, E., Lacoite, A., Rapidel, B., Perez, A., Robelo, A., Barquero, A., Rivera Wilson, C., Navarro, M.N.V., Jourdan, C., Le Maire, G., Thaler, P., Bonnefond, J-M., Harmand, J-M., Vaast, P. (France)*

## Coffee Agronomy. Sustainability – Agro-ecology

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### Communications

- Climate Change - Impact on Coffee Pests  
*Vinod Kumar, P.K. (India)*

- The Socio-Economic Impact of Climate Change on Mesoamerican Coffee Production  
*Läderach, P., Ovalle, O., Baca, M., Eitzinger, A., Oberthür, T. (Nicaragua)*
- Climate Change: Potential Impact on Eastern Africa Coffees  
*Walyaro, D. (Kenya)*
- An Assessment of Land Degradation in Kilimanjaro Region, Tanzania, and Its Implications to Coffee Sustainability  
*Maro, G., Kitalyi, A., Nyabenge, M., Teri, J.M. (Tanzania)*
- Reducing N-NO<sub>3</sub><sup>-</sup> Leached on Coffee Based Agroforestry System by Impede Nitrification  
*Kurniawan, S., Hairiah, K., Widiyanto, Suprayogo, D., Wandri, R. (Indonesia)*
- Carbon Stock Assessment for a Forest-to-Coffee Conversion Landscape in Kalikonto Watershed (East Java, Indonesia): Scale up from Plot to Landscape Level  
*Hairiah, K., Kurniawan, S., Aini, F.K., Lestari, N.D., Lestariningsih, I.D., Widiyanto, Zulkarnaen, T., Van Noordwijk, M. (Indonesia)*

## Coffee Agronomy & Biotechnologies

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### Posters

- Augmentation of Caffeine Alkaloids by Exogenous Indoleamines in *Coffea canephora* P. Ex. Fr. *in Vitro* Cultures: the Possible Involvement of Polyamines  
*Giridhar, P., Ramakrishna A., Sridevi V., Ravishankar G.A. (India)*
- Genetic Study on Several Mechanical Properties of the Wood of *Coffea arabica* and *Coffea canephora* Coffee Trees  
*Cilas, C., Godin, C., Bertrand, B., Montagnon, C., Baillères, H. (France)*
- Coffee Cold Acclimation Ability and Its Relation to Oxidative Stress Control  
*Batista-Santos, P., Lidon, F.C., Fortunato, A.S., Leitao, A.E., Pais, I.P., Ribeiro, A.I., Ramalho, J.C. (Portugal)*
- Participatory Breeding for Improved Arabica Coffee Hybrids in Tanzania Kilambo,  
*D., Lyimo, S.D., Mtenga, D.J., Teri, J.M. (Tanzania)*
- Progress in Accelerated Multiplication and Distribution of Seedlings of Improved Hybrid Coffee Varieties in Tanzania  
*Magesa, J.M., Swai, F.B., Mushi, I.K., Ng'Homa, N.M., Mdemu, S., Teri, J.M. (Tanzania)*
- Diversity of *Coffea canephora* in the Tanzania Germplasm Collection  
*Ng'Homa, M.N., Kilambo, D.L., Mtwenzi, H., Komba, C. (Tanzania)*
- Multiplication of Tanzanian Coffee Arabica Hybrids and Robusta Clones by Somatic Embryogenesis  
*Mtenga, D., Ducos, J-P., Kilambo, D.L., Ngomuo, R., Teri, J.M. (Tanzania)*



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- Characterization of *Coffea arabica* MADS-Box Gene Family  
*de Oliveira, R.R., Mazzafera, P., Dornelas, M.C. (Brazil)*
- Mapping Quantitative Trait Loci (QTLs) for Somatic Embryogenesis Ability and Yield Components in Robusta Coffee (*Coffea canephora*)  
*Priyono, Rigoreau, M., Sumirat, U., Mawardi, S., Wahyudi, T., Broun, P., Petiard, V., Lambot, C., Crouzillat, D. (Indonesia)*
- Establishment of Entomopathogens *Beauveria bassiana* as an Endophyte in Coffee Seedlings *Coffea canephora* and *Coffea arabica*  
*Sulistiyowati, E., Aini, F.N., Mufrihati, E., Susiani (Indonesia)*
- Protein and Lipid Oxidation Level in Just Prepared Coffee Beans  
*Rendon, M., Salva, T., Braghini, M.T., Braganolo, N. (Brazil)*
- The Importance of the Resting Period in the Coffee Grain Aspect and Beverage Quality  
*Rendon, M., Salva, T., Braghini, M.T., Braganolo, N. (Brazil)*
- Morphological Response to Drought of *Coffea arabica* (L.)  
*Charmetant, P., RaKocevic, M. (France)*
- Ecophysiological Differentiation for Drought Tolerance in *Coffea arabica* (L.) Genotypes  
*Rakocevic, M., De Souza, F.S., Charmetant, P. (Brazil)*
- Preliminary Results on Phenotypic Plasticity of Coffee (*Coffea arabica* Cv. Rubi and Iapar59) Plants in Response to Water Constraint Under Field Conditions  
*Rodrigues, G.C., Rojas, J.S.D., Roupsard, O., Leroy, T., Pot, D., Moreira, M.Z., Verdeil, J.L. Dauzat, J., Jourdan, C., Andrade, A. C, Marraccini, P. (Brazil)*
- Effects of Water Stress on Bean Biochemical Composition of *Coffea arabica* cv. Rubi  
*Vinecky, F., Davrieux, F., Alves, G., Mera, A., Leroy, T., Bonnot, F., Pot, D., Rocha, O., Guerra, A., Rodrigues, G., Marraccini, P., Andrade, A. (Brazil)*
- High-Throughput Sequencing of cDNA Extracted from Meristems of *Coffea arabica* cv. Rubi and Iapar59 Submitted to Different Water Field Conditions  
*Vidal, R., Leroy, T., De Bellis, F., Pot, D., Rodrigues, G., Pereira, G., Andrade, A., Marraccini, P. (France)*
- Current Status and Management of Coffee Leaf Rust Disease in Rwanda  
*Gatarayiha, C., Mushimiimana, S., Bigirimana, J., Phiri, N.A. (Rwanda)*
- Evaluation of Coffee Varieties Derived from Diverse Genetic Sources of Resistance for Prospective Exploitation. An International Cooperative Effort  
*Prakash, N.S., Kumar, M.M., Padmajyothi, D., Sudhakar, S.B., Hanumantha, B.Y., Daivasikamani, S., Suresh, N.R., Soumya, P.R., Asha, M.B., Madhura, M., Divya, M.H., Varzea, V.M.P., Silva, M.D.S., Jayarama, Phiri, N.A., Gichimu, B.M. (India)*
- Fourteen Years of Coffee Breeding in Ghana: Achievements and Prospects  
*Anim-Kwapong, E., Anim-Kwapong, J.G., Adomako, B. (Ghana)*

- Quality Assessment of Coffee Genotypes from Brazil  
*Cavaco Bicho, N.C., Lidon, F.C., Ramalho, J.C., Leitao, A.E. (Portugal)*
- Analysis of Population Genetic Diversity and Differentiation in *Hemileia vastatrix* by Molecular Markers  
*Batista, D., Guerra-Guimarães, L., Talhinhos, P., Loureiro, A., Silva, D., Gonzalez, L., Pereira, A. P., Vieira, A., Azinheira, H.G., Struck, C., Silva, Maria Do Céu, Paulo, O. S., Várzea, V. (Portugal)*
- Chlorogenic Acid Content in Coffee Leaves: Possible Role in Coffee Leaf Rust Resistance  
*Leitao, S., Guerra-Guimarães, L., Bronze, M.R., Vilas Boas, L., Sá, M., Almeida, M.H.G., Silva, M.C. (Portugal)*
- Cellular and Molecular Responses in Host and Nonhost Coffee-Rust Interactions (*Hemileia vastatrix* and *Uromyces vignae*)  
*Diniz, I., Talhinhos, P., Azinheira, H.G., Várzea, V., Oliveira, H., Fernandez, D., Silva, M.C. (Portugal)*
- *Hemileia vastatrix* Gene Expression during the Infection Process of Coffee Leaves  
*Vieira, A., Talhinhos, P., Loureiro, A., Duplessis, S., Fernandez, D., Silva, M.C., Paulo, O.S., Azinheira, H.G. (Portugal)*
- A Preliminar Scan at Brazilian Coffea Genome Searching for MicroRNAs.  
*Chalfun-Júnior, A., Silva, S.C., Silva, G.F.F., Valentim, F.L., Paiva, L.V., Andrade, A.C.*
- Shine Gene Improving the Drought Tolerance of Chimeric *Arabidopsis thaliana* and *Coffea Arabica*.  
*Stein, V.C., Chalfun-Junior, A., Paiva, R., Aarts, M.G.M.*
- *In Silico* Characterization of Putative Members of the Coffee (*Coffea arabica*) Ethylene Signaling Pathway  
*Lima, A.A., Ságio, S.A., Chalfun-Júnior, A.*
- Modifications in the Carbohydrates Metabolism in Seedlings of Coffee Tree Progeny Siriema under Drought Conditions  
*Chalfun-Junior, A., Melo, E.F., Fernandes, C.N., Barquero, L.O.B., Alves, J.D.*
- Evolutionary Changes of the Gene Expression Pattern Mediated by Exonized Transposable Element Sequences in Coffee Genomes  
*Lopes, F., Andrade, A.C., Marraccini, P., Teixeira, J.B., Carazzolle, M.F., Pereira, G.A.G., Carareto, C.M.A. (Brazil)*
- Effect of Different Levels of Fertilization on Bean Biochemical Composition in *Coffea arabica* cv. Rubi  
*Vinecky, F., Davrieux, F., Alves, G.S.C., Heimbeck, I.R., Mera, A.C., Leroy, T., Bonnot, F., Pot, D., Guerra, A.F., Rocha, O.C., Rodrigues, G.C., Marraccini, P., Andrade, A.C. (Brazil)*

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- Heterogeneous Characteristics during the Development of *Coffea arabica* Somatic Embryos  
*Arimarsetiowati, R., Ismayadi, C., Priyono (Indonesia)*
- In Vitro Inoculation of Arabica Coffee Derived from Somatic Embryogenesis with *Beauveria bassiana*  
*Sulistiyowati, E., Arimarsetiowati, R. (Indonesia)*
- Predicting the Performance of Introduced *Coffea canephora* Germplasm under Recurrent Selection  
*Anim-Kwapong, E., Anim-Kwapong, J.G., Adomako, B., Akpertey, A. (Ghana)*
- Genotype X Environment Interaction on Yield of Selected *Coffea canephora* Clones in Ibadan, Oyo State, South Western Nigeria  
*Dada, K.E., Omolaja, S.S., Oloyede, A.A., Adeyemi, E.A. (Nigeria)*
- Identification and Partial Characterization of *Sepallata* Genes in *Coffea Arabica L.*  
*Paula, M.F.B., Chalfun-Júnior, A., Barretto, H.G., Paiva, L.V.*
- Coffee Seeds Isotopic Composition as a Potential Proxy to Evaluate Minas Gerais (Brazil) Seasonal Variations during Seed Maturation  
*Rodrigues, C., Maia, R., Brunner, M., Carvalho, E., Ramalho, E., Prohaska, T., Maguas, C. (Portugal)*
- Impact of Different Coffee Shade Trees on Soil Quality Parameters in Relation to Organic Coffee Farming Potential in Yayu District, Southwestern Ethiopia  
*Tesfaye, A., Bobe, B. (Ethiopia)*
- Impact of Different Shade Trees on Coffee Associated Parameters under Different Production Systems of Yayu District, Southwestern Ethiopia  
*Tesfaye, A. (Ethiopia)*
- Traditional Coffee Husbandry Practices in West Hararghe, Ethiopia  
*Netsere, A., Endrise, S., Belachew, B. (Ethiopia)*
- Pre-Sowing Arabica Coffee Seed Management in Ethiopia: a Review  
*Netsere, A., Tefera, W., Belachew, B. (Ethiopia)*
- Early Agronomic Performance of Some New and Existing Arabica Coffee Varieties in Kenya  
*Gichimu, B.M., Omondi, C.O., Gichuru, E.K. (Kenya)*
- Diversity of Shade Trees on Coffee Based Agroforestry System  
*Priyadarshini, R., Hairiah, K., Suprayogo, D., Baon' J.B. (Indonesia)*
- Effect of Higher Density Planting on Coffee Establishment and Growth in Nigeria  
*Famaye, A.O., Iremiren, G.O., Oloyede, A.A. (Nigeria)*

- Evaluation of Coffee Intercropped With Rice and Plantain at Early Stage of Field Establishment in Nigeria  
*Famaye, A.O., Iremiren, G.O., Olubamiwa, O.O., Aigbekaen, A.E., Fademi, O.A., Oloyede, A.A. (Nigeria)*
- Coffee Sector Efficiency and Equity: Lesson Learned from a Comparative Commodity Chain Analysis of Costa Rican and Kenyan Coffee Sector  
*Pinard, F., Le Coq, J.F., Aithal, A. (Kenya)*
- Status of Coffee Production and Marketing in Ghana  
*Anchirinah, V.M., Baah, F., Oppong, F.K., Armon-Armah, F. (Ghana)*
- The Dynamics of Predacious Mites, *Euseuis kenyae*, (Acari: Phytoseiidae) Under Coffee Sprayed with Chlorpyrifos  
*Mugo, H.M., Mwangi, J.M., Ndoiru, S.K. (Kenya)*
- The Benefits and Limitations of Shade Practices in Kenya Coffee  
*Odeny D.A., (Kenya)*
- Positive Effect of Bee Pollination on Coffee Production Is Highly Contingent of Irrigation in Coffee Agroforestry Landscape of Kodagu, Southern India  
*Boreux, V., Vaast, P., Cheppudira, K., Madappa, L., Garcia, C., Ghazoul, J. (Switzerland)*
- Beverage Quality Potential of Bourbon Selections for Specialty Coffee Production in Brazil  
*Giomo, G.S., Borem, F.M., Fazuoli, L.C., Mistro, J.C. (Brazil)*
- Validating the Agro-Ecological Systems of Coffee Land Evaluation in Tanzania Using the Parametric Approach  
*Maro, G.P., Teri, J.M., Mosi, E.J. (Tanzania)*
- Beverage Quality of Wild Ethiopian Arabica Coffee Accessions in Brazil  
*Giomo, G.S., Borem, F.M., Silvarolla, M.B. (Brazil)*
- Microbiological Soil Characteristics of Areas Cultivated with Conilon Coffee under Conventional and Organic Management Systems  
*Partelli, F.L., Vieira, H.D., Ferreira, E.P.B., Viana, A.P., Martins, M.A., Urquiaga, S. (Brazil)*
- Climate Change Adaptation and Mitigation in the Kenyan Coffee Sector (Sangana PPP)  
*Linne, K., Schmitz-Hoffmann, C., Archer, J., Ng'Ang'a, J., Pensel, A., Kuhrt, C. (Germany)*
- Standardization of Optimum Planting Densities and Training Methods for Dwarf Arabica Genotypes Grown under Shaded Canopy  
*Biradar, I.B., Raghuramulu, Y., Hariyappa, N., Shivaprasad, P., Kamalabai, S., Jayarama (India)*

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- Study of Spacing and Fertilizer Requirement on Compact Coffee Varieties in Tanzania  
*Mndolwa, E., Maro, G.P., Kilambo, D.L., Teri, J.M. (Tanzania)*
- Integrating *Cedrela odorata* Trees into Robusta Coffee Production in Ghana as a Diversification Strategy – Establishment Phase  
*Oppong, F.K., Anim-Kwapong, G.J. (Ghana)*
- Population Dynamics of The Coffee Leaf Miner, *Leucoptera meyricki* (Ghesq.) (Lepidoptera: Lyonetiidae) in a Block of Unsprayed Coffee in Chipinge, Zimbabwe  
*Kutywayo, D.A. (Zimbabwe)*
- Effect of Organic Nursery Media on Coffee Seed Germination and Initial Growth  
*Chemura, A., Mahoya, C., Kutywayo, D. (Zimbabwe)*
- Selected Agroclimatic Factors Determining Water Stress of Coffee Plants  
*Erwiyono, R., Bowo, C., Wibawa, A. (Indonesia)*
- Influence of Arbuscular Mycorrhizal Inoculation and Phosphate Fertilizer Types on the Growth of Coffee Seedlings in Two Soil Types in Nigeria  
*Iremiren, G.O., Ibiremo, O.S., Daniel, M.A., Oloyede, A.A., Adejumo, M.O. (Nigeria)*
- Cup Taste Profile Evaluation on the Hybrid Progeny of Congolese and Guinea Groups of Robusta Coffee (*Coffea canephora*)  
*Mawardi, S., Dwi Nugroho, Ucut Sumirat, Yusianto (Indonesia)*
- Evaluation of Alternative Containers for Producing Cloned Seedlings of Coffee Conilon  
*Pires, A., Pinho, L., Fontes, P., Fontes, A., Pinheiro, A., Dos Santos, D., Sian, M., Carvalho, C. (Brazil)*
- Employment Generation in Brazilian Coffee Regions  
*Bliska, F., Guilhoto, J., Imori, D., Sakon, F., Camargo, F., Vegro, C. (Brazil)*
- Influence of Full Sunlight on Trapping of the Coffee Berry Borer *Hypothenemus hampei* Ferrari  
*Dufour, B., Cilas, C., Ribeyre, F. (France)*
- Yield Differences of “Conilon” Coffee Plants Propagated by Cuttings and Seeds along a Nine Year Period  
*Partelli, F.L., Barbosa, D.H.G., Mauri, E.L., Vieira, H.D., Ramalho, J.C. (Brazil)*
- Effects of Shade Tree Composition on the Coffee Quality in Agroforestry Systems of the Kodagu District, South-Western India  
*Vaast, P., Raghuramulu, Y., Menon, S. (France)*
- Coffee Agroforestry with Some Timber Shade Trees. Study on Carbon Stock, Mineral Cycle and Yield  
*Prawoto, A.A., Yuliasmara, F. (Indonesia)*

- Multiple Income Generation in Coffee Farms with *Paraserianthes falcataria* as Shade Trees  
*Prawoto, A.A., Hartatri, D.F.S. (Indonesia)*
- Characteristics of Anatomy, Morphology and Physiology as Indicators for Yield of Robusta Coffee  
*Munandar, D.E., Abdoellah, S., Mardiono, E. (Indonesia)*
- Investigation on Main Factors Influencing the Arabica Green Coffee Quality  
*Lambot, C., Goulois, E., Michaux, S., Pineau, N., De Smet, J., Husson, J., Broun, P. (France)*
- Micro-Landscape Context Effects on the Dispersal of Coffee Berry Borer (*Hypothenemus hampei*) in Costa Rica  
*Olivas, A., Rivera, C., Dufour, B., Hidalgo, E., DeClerk, F., Avelino, J. (Costa Rica)*
- Landscape Context and Plot Incidence of Coffee Rust (*Hemileia vastatrix*), Coffee Berry Borer (*Hypothenemus hampei*) and the Root-Knot Nematodes *Meloidogyne* spp. in Costa Rica  
*Romero, A., Cruz, H., De Melo, E., DeClerck, F., Avelino, J. (Costa Rica)*
- Indonesian Green Arabica Coffee Growing Zones Characterization Using Near Infrared Spectroscopy  
*Davrieux, F., Durand, N., Sianturi, J., Fischer, D.F. (France)*
- Coffee Varieties Behavior (*Coffea canephora* Pierre) in Growing Area of High Altitude in the Northwest Region of Rio De Janeiro State - Brazil  
*Barbosa, D.H.S.G., Partelli, F.L., Vieira H.D., Rodrigues, W.P., Pinto, J.F. (Brazil)*
- Shade Level and Species Composition Affect Carbon Sequestration in Coffee Agroforestry Systems of the Kodagu District, South-Western India  
*Vaast, P., Guillemot, J., Vignault, C., Charbonnier, F., Manjunatha, M., Devakumar, A. (France)*
- The Influence of Primary Processing Methods on the Cup Taste of Arabica Coffee from the Indonesian Island of Flores  
*Marsh, A., Yusianto, Mawardy, S. (Indonesia)*
- Coffee Bourbon Pointu of Reunion Island: The Post-Harvest Process Is One of the Keys to Achieve the Best Sensorial Quality  
*Aguilar, P., Berthiot, L., Descroix, F. (France)*
- Support to Small Coffee Farmer in Thailand Through Large Scale Propagation of *Coffea canephora*  
*Kunasol, T., Ducos, J.-P., Lambot, C., Kasinkasaempong, Y., Chantanumat, P., Broun, P. (Thailand)*
- Coffee and the Environment. A Review  
*Mayoli, R. (Kenya)*

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- Coffee Bourbon Pointu of Reunion Island: How to Define a Terroir to Obtain a «Gourmet» Coffee  
*Descroix, F., Aguilar, P., Berthiot, L. (France)*
- Scaling-Up LAI in Coffee Agroforestry Systems in Costa Rica  
*Taugourdeau, S., Le Maire, G., Roupsard, O., Avelino, J., Gómez-Delgado, F., Jones, J., Marsden, C., Robelo, A., Barquero, A., Alpizar, A., Rapidel, B., Vaast, P., Harmand, J.-M. (France)*
- Sustainable Coffee Production: an Analysis Model for Quality and Certification in the Coffee Agribusiness  
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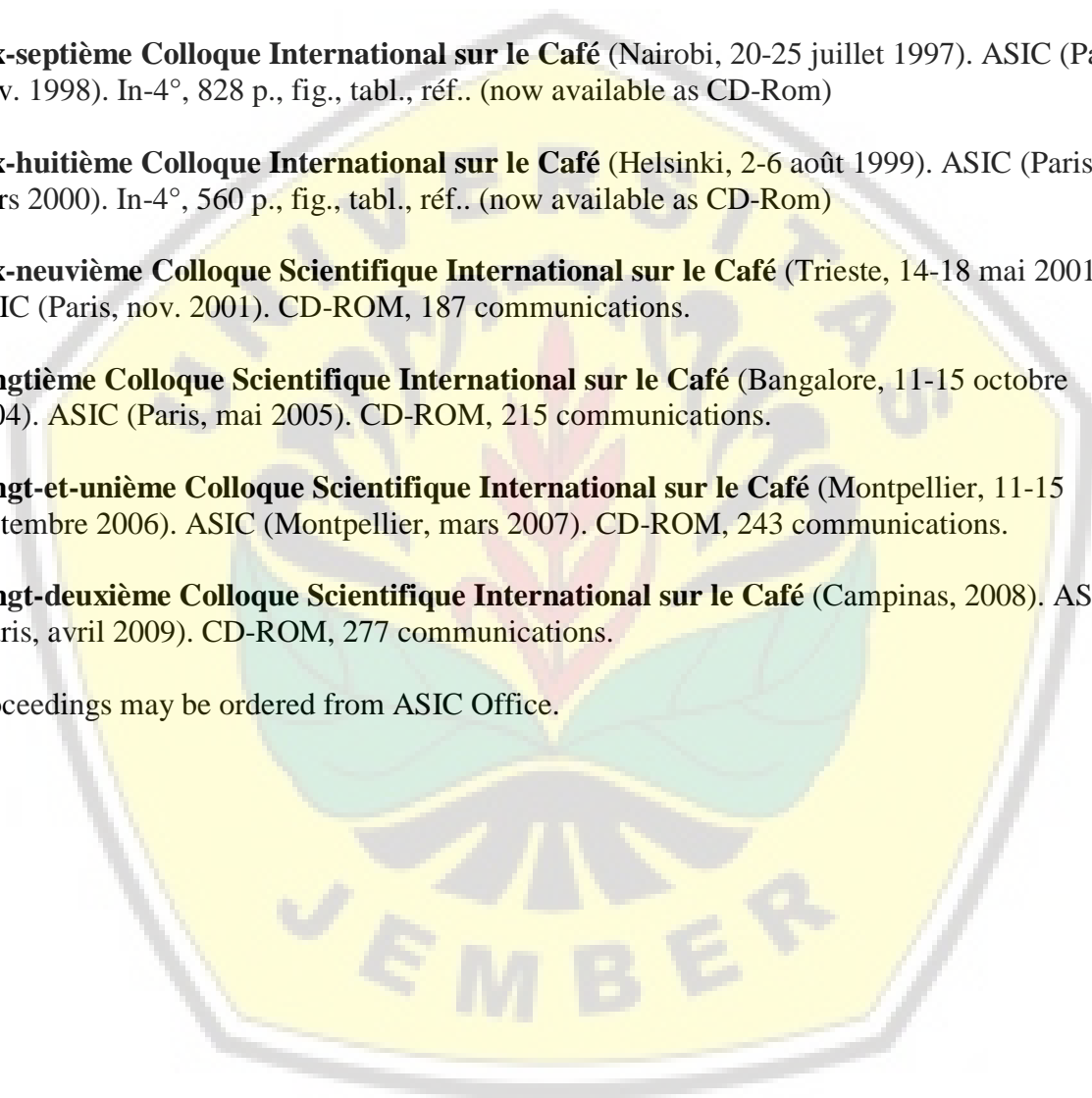
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## Characteristics of Anatomy, Morphology and Physiology as Indicators for Yield of Robusta Coffee

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### SUMMARY

Yield of coffee is affected by some anatomical- as well as morphological properties and physiological activities. Coffee is a C3 plant that has a photosynthetic saturation at a certain light intensity. To know some anatomical-, morphological- and physiological characteristics those affect growth and yield of Robusta coffee, a study has been done at the Indonesian Coffee and Cocoa Research Institute, Jember, East Java, Indonesia. Fully expanded leaves of eight clones have been measured on their area, stomata density, stomata pores area, palisade index, chlorophyll index, and photosynthetic rate. Clones measured were BP 42, BP 358, BP 409, BP 534, BP 936, BP 939, BP 961 and SA 237. Measurement was done at Kaliwining Experimental Station, Jember, Indonesia, at the altitude of 45 m above sea level. Measurement was stressed to describe the dynamic response curve model and to correlate yield to other parameters. The most dominant parameter that affect yield was determined.

### INTRODUCTION

Coffee is one of estate commodities that have a high economic value and as an important income source for Indonesia. Many of coffee plantations in Indonesia are Robusta coffee, but there a little part of those plantations is Arabica coffee. Clones of Robusta coffee cultivated in Indonesia are variable and relatively have different anatomical-, morphological- and physiological characteristics. Their difference in those characteristic might cause a different yield. Coffee is a C3 photosynthetic pathway crop, it means that for optimum growth need only 70% of sunlight and their saturated photosynthesis active radiation (PAR) is around 1000  $\mu\text{mol.m}^{-2}.\text{s}^{-1}$ .

To explore anatomical-, morphological- and physiological characteristics and then to relate to their yield, an observation has been conducted at Kaliwining Experimental Station, Indonesian Coffee and Cocoa Research Institute (ICCRI). The specific objective of the experiment were to describe (1) a dynamic model for photosynthesis rate among varies coffee clones in varying photosynthetic active radiation, (2) to investigate the relationships between photosynthesis rate (P) and other parameters such as chlorophyll index, stomata and palisade towards the yield of coffee clones. Results of those experiments were presented below.

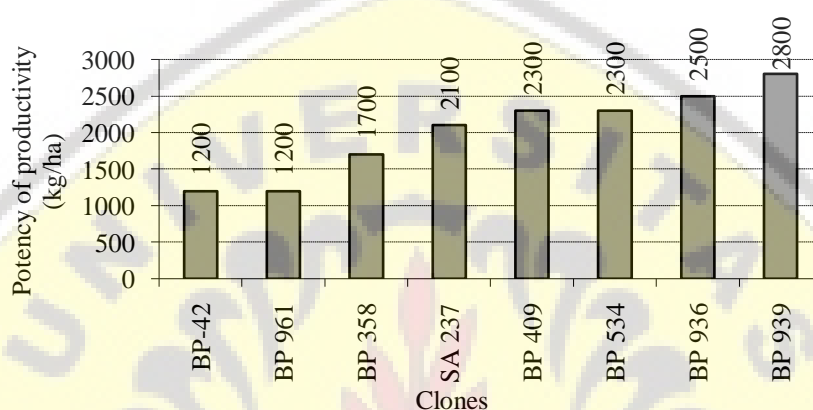
### MATERIALS AND METHODS

Fully expanded leaves of eight clones have been measured on their photosynthetic rate using portable gas exchange system Li-6400 (LI-COR Inc., Lincoln, NE). Besides, chlorophyll index, stomata density and palisade index also observed. Clones measured were BP 42, BP

358, BP 409, BP 534, BP 936, BP 939, BP 961 and SA 237; respectively. Leaves were taken from collection garden of the Indonesian Coffee and Cocoa Research Institute. Chlorophyll index was measured by using chlorophyll meter, stomata density was observed by using light microscope, and palisade index was observed by using binocular microscope. The data collected analyzed with variance analysis. The difference among parameters was tested by LSD at the 0.05 probability level. The relationship between yield and those observed parameters was done to illustrate a role of those parameters to yield.

## RESULTS AND DISCUSSION

Potency of productivity of eight clones observed was varied between 1200 kg/ha to 2800 kg/ha, BP 42 has the lowest of productivity and BP 939 has the highest one.



**Figure 1. Potency of productivity of eight clones observed.**

Leaf area of eight robusta coffee clones those observed was varied between 113-215 cm<sup>2</sup>/leaf, whereas BP 534 was the lowest and BP 409 was the highest one. Range values of other parameters as follows: chlorophyll index was 51.23-61.37 (BP 42 was the lowest and BP 939 was the highest), stomata density was 245-466 stomata/mm<sup>2</sup> (BP 961 was the lowest and BP 936 was the highest), stomata pore area was 3.48-7.31 mm<sup>2</sup>.10<sup>-4</sup> (BP 358 was the lowest and BP 534 was the highest), and palisade index was 24.82-36.97 palisade/epidermal cell (BP 42 was the lowest and BP 936 was the highest); respectively.

**Table 1. Morphology and anatomy properties of eight coffee clones observed.**

Clones	Leaf area (cm <sup>2</sup> /leaf)	Chlorophyll index	Stomata density (stomata/mm <sup>2</sup> )	Stomata pore area (mm <sup>2</sup> .10 <sup>-4</sup> )	Palisade index (palisade/epidermal cell)
BP 42	167.20	51.23	342.20	5.75	24.82
BP 961	172.26	53.70	245.68	3.69	26.66
BP 358	116.22	53.99	263.23	3.48	33.39
SA 237	130.46	56.92	315.87	5.53	24.98
BP 409	214.99	56.59	377.29	5.31	35.09
BP 534	113.01	57.32	421.16	7.31	32.98
BP 936	159.89	59.48	465.03	6.42	36.97
BP 939	136.44	61.37	412.39	5.91	35.54
LSD 5%	41.29	5.52	52.87	3.42	7.019

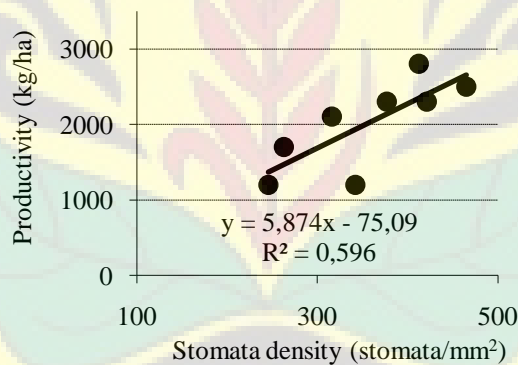


There were positive exponential relationship between photosynthetic active radiation (*PAR*) and photosynthetic rate (*P*) of eight coffee clones. It means that the higher the *PAR*, the higher the photosynthetic rate (*P*) until they reach a maximum point and then constant or gradually decrease. This phenomenon is usual for living objects.

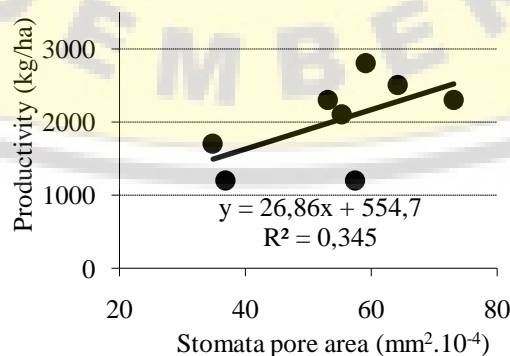
**Table 2. Exponential relationship between photosynthetic active radiation (*PAR*) and photosynthetic rate (*P*.)**

Clones	Equation	$R^2$
BP-42	$Y = 7 (1-\exp(-0.02 \times X/7))$	0.825
BP 961	$Y = 5.8 (1-\exp(-0.0123 \times X/5.8))$	0.829
BP 358	$Y = 8 (1-\exp(-0.0212 \times X/8))$	0.964
SA 237	$Y = 11.5(1-\exp(-0.0297 \times X/11.5))$	0.967
BP 409	$Y = 7 (1-\exp(-0.0164 \times X/7))$	0.903
BP 534	$Y = 7.5 (1-\exp(-0.0177 \times X/7.5))$	0.928
BP 936	$Y = 11 (1-\exp(-0.0239 \times X/11))$	0.979
BP 939	$Y = 13 (1-\exp(-0.0203 \times X/13))$	0.979

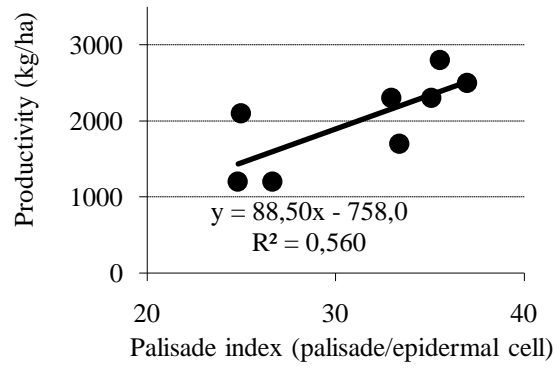
Relationships between morphological-, anatomical- as well as physiological characteristics to potential productivity follow a positive linier regression equation.



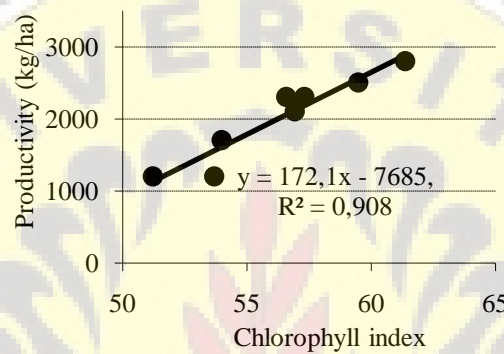
**Figure 2. Relationship between stomata density and productivity.**



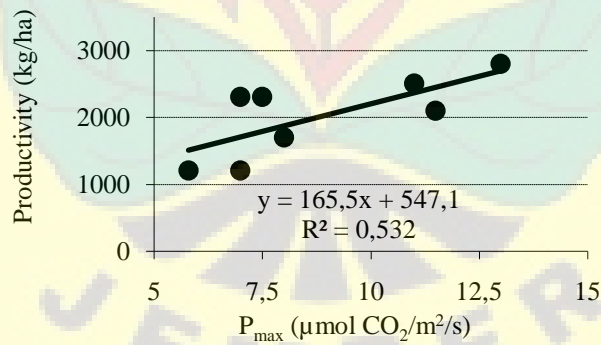
**Figure 3. Relationship between stomata pore area and productivity.**



**Figure 4. Relationship between palisade index and productivity.**



**Figure 5. Relationship between chlorophyll index and productivity.**



**Figure 6. Relationship between maximum photosynthesis and productivity.**

PAR is the intensity of radiation that stimulates photosynthesis reaction actively. It is very logic that until an optimum level, the higher the intensity of radiation, the higher the photosynthetic rate. Radiation is very close related to photosynthesis. Photosynthesis only takes place when sunlight is presence.

Stomata density, palisade index, chlorophyll index and photosynthesis were significantly affected productivity of coffee clones. It is very logic because those characters were governed assimilate production. Based on determination coefficient ( $R^2$ ) value, chlorophyll index was the character that has closest relationship to productivity of robusta coffee clone.

## CONCLUSIONS

- Potency of productivity of eight clones observed was varied between 1200 kg/ha to 2800 kg/ha, BP 42 has the lowest and BP 939 has the highest one.
- There were positive exponential relationship between photosynthetic active radiation (*PAR*) and photosynthetic rate (*P*) of eight coffee clones.
- Stomata density, palisade index, chlorophyll index and photosynthesis were significantly affected productivity of coffee clones with positive linier regression equation.
- Chlorophyll index was the character that has closest relationship to productivity of robusta coffee clone.

## REFERENCES

- Ainsworth, E.A. and A. Roger. 2007. The response of photosynthesis and stomatal conductance to rising ( $\text{CO}_2$ ) mechanism and environmental interaction. *Plant Cell and Environment* 30: 258-270.
- Clifford, M.N. and K.C. Willson. 1985. *Coffee; Botany, Biochemistry and Production of Beans and Beverage*. Croom Helm, London, 457 p.
- Hall, D.O. and K.K. Rao. 1999. Photosynthesis. 6<sup>th</sup> Ed. Cambridge Univ. Press. London. p.214.
- Roviq, M. 2008. Light respon curve parameters based model of measuring photosynthesis, stomatal conductance, transpiration and intercellular  $\text{CO}_2$  of soybean (*Glycine max*, Merr.). Fac. of Agriculture, Brawijaya University (unpublished).
- Salisbury, F.B. and C.W. Ross. 1992. *Plant Physiology*. Wadswort Publ. Co. Belmont California. pp 682
- Wrigley, G. 1988. *Coffee*. Longman, London, 639 p.