




Dr. Emily W. Gichuhi

Plant Geneticist & Breeder

A dedicated and reliable plant biotechnologist and molecular biologist working on crop improvement using genetic engineering techniques and molecular tools such as marker assisted selection, plant genetics transformation etc towards development of improved rice varieties adapted to Kenyan environs. I have a goal-oriented approach to my work and strive to attain high quality results.



 gichuhiemily@gmail.com  +254717829725  KALRO ICRC Mwea

TECHNICAL SKILLS

Computer	Microsoft Office, R Software, WinQTL cartographer, MapDisto, SPS Software, Mapmaker 3.0	Research	Rice Breeding, Marker Assisted Selection (MAS), QTL analysis, DNA sequencing, Gel Electrophoresis, DNA Extraction, PCR, Project Planning, Implementation and Management, Conventional Breeding, Genetic Transformation, Tissue Culture
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WORK EXPERIENCE

Research Scientist

Kenya Agricultural and Livestock Research Organization (KALRO) Industrial Crops Research Centre (ICRC)

07/2017 - Present
[Achievements/Tasks](#)

- Implementing experiments, collecting and collating data, and performing basic data analysis.
- Preparing material and equipment, and supervising manpower support as needed in the experiments.
- Publishing research reports.
- Head of the rice research molecular laboratory at KALRO ICRC Mwea.
- Carrying out adaptation trials and breed improved rice varieties and evaluating stress tolerance in various rice lines
- Developing ideas for generating income, promoting research area and influencing leading edge practice
- Deciding on research programs and methodologies, often in collaboration with colleagues and sometimes subject to the approval of the head of the research program on fundamental issues.
- Writing proposals to secure research funding and grants.
- Training students in attachment and trainers of trainees in rice production.

Senior Research Assistant

SATREPS Projects JICA

05/2017 - 06/2017
[Achievements/Tasks](#)

- Carrying out experiments and research according to protocols laid out by primary researchers, collecting and log experimental data.
- Conducting statistical analysis of data sets and prepare graphs and spreadsheets to portray results.
- Creating presentation slides and posters to help researchers present findings.
- Review and print online resources to gather information; check facts, proofread and edit research documents to ensure accuracy, and maintain laboratory equipment and inventory.

RESEARCH EXPERIENCE

Research Assistant

Institute of Plant Science and Resources (IPSR), Okayama University, Department of Plant Stress Science, Kurashiki

10/2013 - 03/2017

Okayama, Japan

Research Assistant

Jomo Kenyatta University of Agriculture and Technology, Department of Horticulture

01/2010 - 03/2013

Thika, Kenya

HONOR AWARDS

Dean's Scientific Award (03/2017)
Okayama University, Japan

Dean's Scientific Award (09/2013)
Okayama University, Japan

Monbukagasho: (MEXT) Scholarship 10/2013
Japanese Government

Monbukagasho: (MEXT) Scholarship 04/2011
Japanese Government

EDUCATION

Dr. of Philosophy in Agriculture

Graduate School of Environmental and Life Science
Okayama University

Thesis: Genetic Analysis for High Productivity Derived from Oryza Longistaminata under low-input Conditions in Rice
10/2013 - 12/2017

BSc. Horticulture

Jomo Kenyatta University of Agriculture and
Technology

Thesis: Effect of potassium nutrition on yield and oil content in Ethiopian mustard and canola.
04/2006 - 12/2009

PUBLICATIONS

Book Chapter

Development of Rice Breeding and Cultivation Technology Tailored for Kenya's Environment

Author(s)

Daigo Makihara, John Kimani, Hiroaki Samejima, Mayumi Kikuta, Daniel Menge, Kazuyuki Doi, Yoshiaki Inukai, Masahiko Maekawa, Tsugiyuki Masunaga, Yuka Sasaki, Keisuke Katsura, Hidemi Kitano, Shiro Mitsuya, Mana Kano-Nakata, Cornelius Wainaina, **Emily Gichuhi**, Symon Njinju, Sammy Kagito, Rahab Magoti, Caroline Kundu, Akira Yamauchi
Aug 1 2018, Springer Singapore/27-47/21

Journal Publication

A Method for Evaluating Cold Tolerance in Rice During Reproductive Growth Stages Under Natural Low-temperature Conditions in Tropical Highlands in Kenya

Author(s)

Hiroaki Samejima, Mayumi Kikuta. Keisuke Katura, Daniel Menge, **Emily Gichuhi**, Cornelius Wainaina, John Kimani, Yoshiaki Inukai, Akira Yamauchi & Daigo Makihara
2020, Plant Production Science, 23:4. 466-476,

Journal Publication

Characterization and QT Analysis of Oryza Longistaminata Introgressed Line, pLIA-1, Derived from a Cross Between Oryza Longistaminata and Oryza Sativa (Taichung 65) under Non-fertilized Conditions

Author(s)

Emily Gichuhi, Eiko Himi, Hidekazu Takahashi, and Masahiko Maekawa (2016)
2016, J Rice Res 4:3:174

Journal Publication

Vigorous Growth and High Yielding of Rice (Oryz Sativa) Introgression Lines and Transformants Carrying a PRR37 Allele from Wild Rice O. Longistaminata, Plant breeding

Author(s)

Maekawa M., Kashiharaz M., Gichuhi E. Himi E., Murai M. Ishikawa N., Hiei Y., Ishida Y., Komari T. and T Komori T.
2021, Plant Breeding

MEMBERSHIPS

Japanese Society of Breeders (2012 - Present)

Crop Science Society of Japan (2019 - Present)

Cereals Cereals and Pulses Technical committee for KEBS
(2019 - Present)

Masters of Agriculture

Graduate School of Natural Science and Technology,
Okayama University

Thesis: QTL Analysis of Genetic Factors for High Productivity from Oryza Longistaminata, an African wild rice, under low-input Conditions in Rice
10/2011 - 09/2013

PUBLICATIONS

Journal Publication

Preliminary QT Detection for Improving Basmati Rice in a f2 Population Derived from the Cross Between Kernel Basmati and pLIA-1 Carrying Oryza Longistaminata Chromosome

Author(s)

Gichuhi E., Himi E., Ahmed N., Takahashi H., Maekawa M.
2016, *SABRAO journal of breeding and genetics* 48(4) 402-415

Journal publication

Identification of QTs for Yield-related Traits in RILS derived from the cross between pLIA-1 carrying Oryza longistaminata Chromosome Segments and Norin 18 in Rice.

Author(s)

Emily Gichuhi, Eiko Himi, Hidekazu Takahashi, Sinhao Zhu, Kazuyuki Doi, Kazuo Tsugane, Masahiko Maekawa (2016)
2016, *Breeding Science* DOI:10.1270/jsbbs.16083

Feature

Integrated strategies for durable rice blast resistance in Sub- Saharan Africa.

Author(s)

Samuel K. Mutiga, Felix Rotich, Vincent M. Were, John M. Kimani, David T. Mwongera, Emmanuel Mgonja, Geoffrey Onaga, Kadougoudiou Konaté, Claudine Razanaboahirana, Joseph Bigirimana, Alexis Ndayiragije, Emily Gichuhi, Mary J. Yanoria, Miriam Otipa, Lusike Wasilwa, Ibrahima Ouedraogo, Thomas Mitchell, Guo-Liang Wang, James C. Correll, and Nicholas J. Talbot
23 Nov 2021, *APS Publications*

REFEREES

Dr. Samuel Mutiga

Pathologist

Bioscience eastern and central Africa (BecA)-ILRI Hub,
Nairobi, Kenya
S.Mutiga@cgiar.org
+254721663751

Dr. Hunja Murage

Senior Lecturer

Jomo Kenyatta University of Agriculture and
Technology, Kenya.
hunjamurage@gmail.com
+254727909227

Dr. Makihara Daigo

Associate Professor

Rice agronomy
International Centre for Research and Education in Agriculture
(ICREA),
Nagoya University, Japan.
makihara@agr.nagoya-u.ac.jp
+819042666011