

## CURRICULUM VITAE

FULL NAME	<b>DR. BERNARD MUKIRI GICHIMU, PhD</b>
PROFESSION	Horticulturist/Plant Breeder
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DATE OF BIRTH	1979
GENDER	Male
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PASSPORT NUMBER	AK0162668
MARITAL STATUS	Married
RELIGION	Christian
NATIONALITY	Kenyan
LANGUAGES	English, Kiswahili and Kikuyu



### EDUCATION BACKGROUND

- |           |   |
|-----------|---|
| 2009-2013 | Jomo Kenyatta University of Agriculture & Technology – PhD in Plant Breeding<br><b>Title of Thesis:</b> <i>Selection for Resistance to Coffee Berry Disease, High Yields and Good Quality within Coffea arabica L. Cultivar, Ruiru 11</i> |
| 2006-2008 | Maseno University – MSc. in Horticulture (Horticultural Breeding)<br><b>Title of Thesis:</b> <i>Genetic Variation and Agronomic Performance of Some Wild and Cultivated Watermelon (Citrullus sp.) Accessions in Kenya</i>                |
| 2000-2005 | Maseno University – BSc. in Horticulture ( <b>First Class Honours</b> )   |
| 1995-1998 | Giakanja Boys High School - KCSE Certificate (B Plain)  |
| 1986-1994 | Birithia Primary School - KCPE Certificate  |

### SUMMARY OF PROFESSIONAL SKILLS

- Project/program Management including M&E and Strategic Planning
- Intensive Crop Management
- Germplasm Collection, Selection and Plant Heredity Improvement
- Germplasm Propagation and Multiplication
- Conversant with Variety Release Procedures
- IPM Methods of Soil Fertility Management and Crop Protection
- Molecular Biology and Biotechnology Techniques
- Development of Training Curricula for Short Proficiency Courses
- Development and Review of Curricula for Undergraduate and Postgraduate Courses
- Acquainted with Intellectual Property Management and Patent Drafting
- Design and Analysis of Scientific Experiments and Farm Based Trials
- Writing Project Proposals, Scientific Papers and Technical Reports

- Proficiency in ICT Applications and Data Analysis Packages
- Extension/Farmer Advisory and Training Skills
- Excellent Organisational and Communication Skills
- Administrative Skills and Staff Management
- ISO 9001:2008 QMS Implementation and Internal Quality Auditing
- ISO 9001:2015 Quality Management System (QMS) Implementation
- ISO 27001:2013 Information Security Management System (ISMS) Implementation
- Environmental Audit and Environmental Impact Assessment

## **PROFESSIONAL EXPERIENCE**

**2014 – Present: Lecturer of Horticulture and Plant Breeding, University of Embu.**

### **Responsibilities:**

- Teaching undergraduate and postgraduate students
- Formulating and implementing research projects
- Conducting agricultural extension services
- Dissemination of research findings through scientific reports and publications
- Supervision of students (4<sup>th</sup> Year, MSc and PhD Research Projects)
- Developing new academic programmes and improving existing ones
- Mentoring students through academic, research and career paths.

**2019 – present External Examiner, Great Lakes University of Kisumu**

### **Responsibilities:**

- Examining thesis for MSc and PhD students
- Examining Examination Drafts and Marked Scripts

**2017 – Present: External Examiner, Maseno University**

### **Responsibilities:**

- Examining thesis for MSc and PhD students

**2008 – 2014: Research Officer (Plant Breeder), Coffee Research Institute**

Coffee Research Institute (CRI) is a state corporation whose mandate is to research, develop and disseminate appropriate technologies for enhanced coffee productivity, quality and value addition.

### **Responsibilities:**

- Formulating and implementing research projects on coffee improvement
- Overseeing molecular techniques & procedures in coffee improvement
- Preparing research reports and scientific publications
- Participating in the Research Advisory and Technical Committee (RATC) meetings
- Propagation of improved coffee varieties for commercialization by farmers
- Coordinating advisory matters in liaison with Extension Officers

### **Achievements:**

- ✓ Released 3 Coffee Varieties namely Batian 1, Batian 2 and Batian 3
- ✓ Intensified Selection within Ruiru 11 Coffee Cultivar

**2008 – 2008: Assistant Farm Manager, Kenfloraa Limited**

Kenfloraa limited is a medium sized floriculture company situated in Kiambu County in Kenya.

**Responsibilities:**

- Preparation and implementation of annual production calendar
- Setting production targets
- Preparation of spray and fertigation programmes
- Provision of technical and professional guidance regarding greenhouse production
- Supervision of staff in production, construction and general maintenance departments
- Preparation of production budgets and procurement plan
- Taking farm inventories

**2005 – 2006: Quality Assurance Officer, Agrifresh (K) Limited**

Agrifresh (K) Limited (formerly known as Vitacress (K) Limited) is a grower, packer and exporter of prepared specialty vegetables and baby leaf salads located on the northern slopes of Mt. Kenya.

**Responsibilities:**

- Implementing approved Company and accreditation quality specifications, together with maintaining accurate and up-to-date quality assurance documentation.
- In charge of quality assurance in dispatch and salads sections including packaging and labeling, product quality, pack-house and workers hygiene and safety.
- Approving dispatch of vegetables and baby leaf salads pre-packs from pack house to airport as per received orders.

**2005 – 2005: Production Supervisor, Isinya Roses Limited****Responsibilities:**

- Supervising all activities involved in greenhouse rose production
- Scouting for diseases and pests and recommending control measures
- Quality assurance in the grading hall/pack-house.

**2005 – 2005: Research Assistant, Tegemeo Institute of Agricultural Policy and Development**

Conducted a research assignment on Survey of Dairy Farming in Marginal areas; Case Study of Machakos and Makueni Districts in Eastern Province, Kenya.

**Responsibilities:**

- Administering Questionnaires
- Interviewing and Collecting Data from Farmers
- Data Entry, Analysis and Interpretation

**ADMINISTRATIVE EXPERIENCES****2017 – Present: Chairman, Department of Agricultural Resource Management, University of Embu****Responsibilities:**

- Representative of the Vice-Chancellor in the Department
- Academic and Administrative Head of the Department
- Overseeing implementation of policies in the Department
- Representing the department in the appropriate University Committees
- Preparing annual departmental budget estimates and procurement plan
- Initiating all departmental procurement and maintaining a departmental vote book
- Submitting annual reports and performance contracts returns
- Carrying out staff appraisals and recommending rewards/sanctions

**2014 – Present: Chairman, Environmental, Health and Safety Committee, University of Embu**

**Terms of Reference:**

- Domesticate Environmental Policy at the workplace
- Develop and implement environmental awareness creation programmes
- Develop and implement environmental protection and sustainability programmes
- Develop and implement climate change adaptation and mitigation initiatives
- Submit quarterly reports to the National Environment Management Authority (NEMA)
- Reviewing and ensuring adherence to the University Environmental Health and Safety Policy.

**2015 – 2019: Member of the Board of Management of Birithia Secondary School in Nyeri County**  
**Responsibilities:**

- Overseeing the school's accountability systems and approve capital expenditures
- Approving all material expenditure outside the budget
- Setting and enforcing implementation of major goals, strategies and policies
- Setting and monitoring of the ethical standards of the school
- Reviewing and monitoring adherence to systems of risk management, governance and legal compliance and curriculum as prescribed by the Ministry of Education.
- Monitoring organizational and student's performance
- Ensuring compliance with the education policies, regulations.

**2014 – 2017: Examination Coordinator, School of Agriculture, University of Embu**  
**Responsibilities:**

- Consolidating all departmental examination results
- Preparing and compiling all examination results in consultation with the dean of school for presentation at the University Academic Board and Senate
- Dealing with all examination matters arising from students at school level
- Preparing and issuing provisional examination results at school level

**2013 – 2015: Member of the Board of Directors and Education Committee of Jacaranda SACCO**  
**Responsibilities:**

- Decision making on policy issues
- Staff supervision
- Appraisal of new members
- Appraisal of loan applications

**2009 – 2014: Head, Plant Breeding Section, Coffee Research Institute**  
**Responsibilities:**

- Supervising Management Staff in all activities allocated and training technical staff
- Handling all staff administrative duties in liaison with the Administrative Manager
- Carrying out staff appraisals and recommending rewards/sanctions
- Mobilizing necessary resources from the government and development partners
- Preparing annual sectional budget estimates and procurement plan
- Initiating sectional procurement and maintaining a sectional vote book
- Preparing and cascading annual sectional performance contract targets

**2010 – 2014: Chairman, Coffee Research Institute Budget Committee**  
**Terms of Reference:**

- Review of annual budget submissions and preparation of the annual Institution budget and supplementary budget when necessary.
- Monitoring of budget allocations and expenditure.

### **CURRICULA DEVELOPMENT AND REVIEW**

Have participated in the development of the following curricula:

- 1) Master of Science in Animal Science – Ongoing
- 2) Doctor of Philosophy in Animal Science – Ongoing
- 3) Bachelor of Science in Agricultural Biotechnology in 2018
- 4) Bachelor of Science in Animal Production and Nutrition in 2018
- 5) Diploma in Agriculture in 2017
- 6) Diploma in Horticulture in 2017
- 7) Diploma in Seed Science in 2017
- 8) Diploma in Agricultural Biotechnology in 2017
- 9) Diploma in Animal Production and Nutrition in 2017
- 10) Short Proficiency Courses in Pig and Poultry Farming, Dairy Farming, Nursery Management, Post-harvest Handling, Seed Production, Mushroom Production, Greenhouse Management, Value Addition in Mangoes, Bananas, Coffee Husbandry and Coffee Processing

Have participated in the review of the following curricula:

- 1) Bachelor of Science in Range Management - Ongoing
- 2) Diploma in Crop Protection – Ongoing
- 3) Bachelor of Science in Horticulture in 2018
- 4) Bachelor of Science in Agriculture in 2019

### **CONSULTANCY SERVICES**

- 2019 to Date:** Engaged by International Trade Centre for provision of services related to a training on coffee processing in East African Community Member Countries.
- 2019 to Date:** Engaged by Trabocca BV, a Holland based coffee buyer to implement a Coffee Improvement Project among farmers of Ndaroini Coffee Growers PLC in Nyeri, Kenya. The project objective is to improve the coffee yields among small scale farmers from 3 kg per tree to 20 kg per tree by 2021.
- 2019 to Date:** Spearheading establishment of a Coffee Centre at University of Embu in collaboration with Beanstitute Academy and California Coffee Importers. The Coffee Centre will be handling all coffee related issues from seed to cup.

### **OTHER AGRO-ENTREPRENEURSHIP ENGAGEMENTS**

- 2014 – Present:** **Commercial Horticultural Farmer** – Producing Irrigated Watermelon, Tomatoes and Green Maize in Dry Parts of Tharaka Nithi and Embu Counties.
- 2014 – Present:** **Commercial Livestock Farmer** – Engaging in Modern Dairy, Pig and Poultry Farming.

### **SPIRITUAL LEADERSHIP**

- 2016 – 2018:** Chairman, St. James Catholic Church, Jacaranda
- St. James Catholic Church, Jacaranda, is located within the premises of Coffee Research Station in Ruiru and is one of the catholic church outstations under St. Francis of Assisi Ruiru Catholic Parish.
- 2013 – 2015:** Vice Chairman, St. James Catholic Church, Jacaranda

## **RESEARCH PROJECTS IMPLEMENTATION / MANAGEMENT**

**2019 On-going: Research Collaborator, Bambara Groundnut Promotion Project - Funded by University of Embu Vice-Chancellor's Grant.**

**Project Title:** Enhancing Community Resilience and Adaptation to Climate Change Through Participatory Evaluation and Selection of Elite Bambara Groundnut Genotypes for Improved Food and Nutrition Security in Semi-Arid Lands of Eastern Kenya.

**2018 On-going: Research Collaborator, BecA-ILRI, IGSS Project – Funded by Bill & Melinda Gates Foundation**

**Project Title:** Characterization of Genetic Markers Conferring Resistance to Coffee Berry Disease (*Colletotrichum kahawae*) in Arabica Coffee (*Coffea arabica* L.) using Single Nucleotide Polymorphism (SNP)

**2013 – 2014: Project Coordinator, Coffee Productivity Project – Funded through Grant by the European Union under the Kenya Rural Development Programme (KRDP)**

**Project Title:** Enhancement of coffee production through accelerated and sustainable production and access of planting materials

**Responsibilities:**

- Coordinating the implementation of all activities of the project in accordance with the Project Document and the approved annual work plans and budget.
- Preparation of the Project's annual work plans, budgets, procurement plans and technical/financial reports in liaison with the European Union Technical Assistant
- Presenting semi-annual and annual project reports to Project Steering Committee.
- Assisting the Project Accountant in filing grant reimbursement claim

**2013 – 2014: Project Coordinator, WCR IMLVT Project – Funded through Grant by the World Coffee Research**

**Project Title:** International Multi-Locational Variety Trial of Arabica Coffee

**Project Objective:** To increase the supplies of high quality coffee for the global specialty coffee market through scientific research and the dissemination of research results to the global specialty coffee community.

**2009 – 2012: National Project Coordinator, Coffee Leaf Rust Project**

**Project Title:** Increasing the Resilience of Coffee Production to Leaf Rust and Other Diseases in India and Four African Countries (CFC/ICO/40)

**Responsibilities:**

- Coordinating the implementation of all activities of the project in accordance with the Project Document and the approved annual work plans and budget.
- Preparation of the Project's annual work plans, budgets, and technical/financial reports in liaison with the Project Accountant.
- Presenting project reports to Project Team, Project Steering Committee and during end-of-year Project Workshop.

**2009-2011: Activity Leader, QCPCP Project**

**Project Title:** STABEX FMO 1990 and 1991: Quality Coffee Production and Commercialization Support Program (QCPCP) – Sponsored by the European Union

**Responsibilities:**

- Implementing the project activities under Plant Breeding Section in liaison with the Technical Coordinator and other scientific sections.

#### **OTHER AWARDS AND RECOGNITION**

- i) Awarded an OKP/NFP-scholarship for the ICRA course “**Making Research Work - Solving Complex Agri-food Problems through Action Research**” conducted through online sessions from 14th October to 27th December 2019 but with a face to face part in the Netherlands from 11<sup>th</sup> to 22<sup>nd</sup> November 2019.
- ii) Awarded **financial support of £1500** by Specialty Coffee Association (SCA) to attend the 27<sup>th</sup> ASIC Conference in Portland (USA), September 16-20, 2018.
- iii) Awarded **financial support of €2500** by Association of Science and Information in Coffee (ASIC) to attend the 25<sup>th</sup> ASIC Conference in Armenia (Colombia), September 8-13, 2014.
- iv) Awarded **financial support of €1500** by Association of Science and Information in Coffee (ASIC) to attend the 24<sup>th</sup> ASIC Conference in San José (Costa Rica), November 11-16, 2012.
- v) Recognized by Embu University College for **Outstanding Contribution towards the University's attainment of Composite Score of 1.9826 in the Excellent Category** in the 2014/15 Financial year Performance Contract.
- vi) **First Prize Winner** for Oral Presentation entitled “Variation and Association of Cup Quality Parameters and CBD Resistance in *Coffea arabica* cv Ruiru 11” presented at the 12<sup>th</sup> Horticultural Association of Kenya Workshop held from 4<sup>th</sup> to 7<sup>th</sup> December 2012 at Bondo University College, Kenya.
- vii) Recognized by Ministry of Public Service for **Excellence in Science and Application** Category during the 2011 Public Service Innovation.
- viii) Awarded a **Sponsorship of Kshs 510,000 for PhD Studies** at Jomo Kenyatta University of Agriculture and Technology (JKUAT) by Common Fund for Commodities in 2010.
- ix) **First Prize Winner** for Oral Presentation entitled “Performance of Five *Coffea arabica* L. Advanced Breeder's Lines and Two Commercial Cultivars in Kenya under Varying Environment” during the 9<sup>th</sup> Horticultural Association of Kenya Workshop held from 2<sup>nd</sup> to 5<sup>th</sup> December 2009 in Arusha, Tanzania.
- x) Awarded a **Sponsorship of Kshs 200,000 for Masters Studies** at Maseno University by Higher Education Loans Board in 2006.

#### **PUBLICATIONS IN REFEREED JOURNALS**

- 1) Susan K. Onsongo, **Bernard M. Gichimu**, Komivi S. Akutse, Thomas Dubois and Samira A. Mohamed (2019). Performance of Three Isolates of *Metarhizium anisopliae* and Their Virulence against *Zeugodacus cucurbitae* under Different Temperature Regimes, with Global Extrapolation of Their Efficiency. *Insects* 2019, 10, 270; doi:10.3390/insects10090270.
- 2) Eliud K. Murimi, Lucy K. Njeru, **Bernard M. Gichimu** and Samuel N. Ndirangu (2019). Effects of Urban Expansion on Agricultural Resources: A Case Study of Embu Town in Kenya. *Asian Journal of Agricultural Extension, Economics & Sociology*, 33(4): 1-11, 2019.
- 3) Arphaxard Ireri Muthee, **Bernard Mukiri Gichimu** and Paul Njiruh Nthakanio (2019). Analysis of banana production practices and constraints in Embu County, Kenya. *Asian Journal of Agriculture and Rural Development*, 9(1), 123-132.
- 4) Chrispine Omondi, **Bernard Gichimu**, Jane Cheserek and James Gimase (2016). Leveraging on germplasm acquisition for Arabica coffee improvement in Kenya. *Journal of Agricultural and Crop Research* Vol. 4(1), pp. 9-16.
- 5) Daniel Mutiso Nthiwa, David O. Odongo, Horace Ochanda, Samoel Khamadi, and **Bernard M. Gichimu** (2015). Trypanosoma Infection Rates in Glossina Species in Mtito Andei Division, Makueni County, Kenya. *Journal of Parasitology Research*, Volume 2015, Article ID 607432, 8 pages.
- 6) S.G. Ligabo, E.K. Gichuru, O. Kiplagat, **B.M. Gichimu** (2015). Status of Coffee Leaf Rust Resistance on Kenyan Commercial Resistant Cultivars. *British Microbiology Research Journal*; 8(6): 655-662.

- 7) Lucy K. Njeru, **Bernard M. Gichimu**, Mary C. Lopokoiiyt and John G. Mwangi (2015). Influence of Kenyan Youth's Perception towards Agriculture and Necessary Interventions; a Review. *Asian Journal of Agricultural Extension, Economics & Sociology*; 5(1): 40-45.
- 8) Lucy K. Njeru and **Bernard M. Gichimu** (2014). Influence of Access to Land and Finances on Kenyan Youth Participation in Agriculture; a Review. *International Journal of Development and Economic Sustainability*; 2(3): 1 – 8.
- 9) J.M. Gimase, W.M. Thagana, D.T. Kirubi, E.K. Gichuru and **B.M. Gichimu** (2014). Genetic Characterization of Arabusta Coffee Hybrids and their Parental Genotypes using Molecular Markers. *Plant Cell Biotechnology and Molecular Biology*, 15(1&2):31-42
- 10) M.W. King'oro, D. Mushimiyamana, J.J. Cheserek and **B.M. Gichimu**, 2014. Effect of Different Watering Regimes on Agro-morphology of Selected Coffee Genotypes. *American Journal of Experimental Agriculture*; 4(9):1016-1026.
- 11) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2014. Biochemical Composition within *Coffea arabica* cv. Ruiru 11 and its Relationship with Cup Quality. *Journal of Food Research*; 3(3): 31-44.
- 12) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2014. Occurrence of *Ck-1* gene conferring resistance to Coffee Berry Disease in *Coffea arabica* cv. Ruiru 11 and its parental genotypes. *Journal of Agricultural and Crop Research*, 2(3): 51-61.
- 13) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2013. Variation and Association of Cup Quality Attributes and Resistance to Coffee Berry Disease in *Coffea arabica* L. Composite Cultivar, Ruiru 11. *Afr. J. Hort. Sci.* (December 2013) 7:22-35.
- 14) Ithiru J.M., Gichuru E.K., Gitonga P.N., Cheserek J.J. and **Gichimu B.M.**, 2013. Methods for early evaluation for resistance to bacterial blight of coffee. *African Journal of Agricultural Research*, 8(21): 2450-2454
- 15) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2013. Yield Selection within *Coffea arabica* cv. Ruiru 11. *American Journal of Experimental Agriculture*, 3(1): 76-88.
- 16) Cheserek J.J. and **Gichimu B.M.**, 2012. Drought and heat tolerance in coffee: a review. *International Research Journal of Agricultural Science and Soil Science*, 2(12): 498-501.
- 17) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2012. Selection within *Coffea arabica* cv. Ruiru 11 for high cup quality. *African Journal of Food Science*, 6(18): 456-464
- 18) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2012. Selection of Ruiru 11 Hybrid Sibs on Raw Coffee Quality. *Afr. J. Hort. Sci.*, 6:72-82
- 19) **Gichimu B.M.**, 2012. Field Screening of Selected *Coffea arabica* L. Genotypes against Coffee Leaf Rust. *Afr. J. Hort. Sci.* (June 2012) 6:82-91
- 20) Kathurima C.W., Kenji G.M., Muhoho S.M., Boulanger R., **Gichimu B.M.** and Gichuru E.K., 2012. Genetic diversity among commercial coffee varieties, advanced selections and museum collections in Kenya using molecular markers. *International Journal of Biodiversity and Conservation*, 4(2): 39-46.
- 21) D.M. Mureithi, M.O.A. Onyango, P. Jeruto and **B.M. Gichimu**, 2012. Response of French Bean (*Phaseolus vulgaris* L.) to Intra-Row Spacing in Maseno Division, Kenya. *J. Applied Sci.*, 12(1): 96-100.
- 22) R.B.Mugiira, P.F. Arama, J.M. Macharia and **B.M. Gichimu**, 2011. Antibacterial Activity of Foliar Fertilizer Formulations and their Effects on Ice Nucleation Activity of *Pseudomonas syringae* Pv. garcae Van Hall, the Causal Agent of Bacterial Blight of Coffee. *Int. J. Agric. Res.*, 6(7): 550-561
- 23) A.G. Wagura, J.W. Kimenju and **B.M. Gichimu**, 2011. Comparative Antibacterial Effects of Raw Extracts and Essential Oils of *Ocimum gratissimum* L. against *Ralstonia solanacearum* (Smith) *Int. J. Plant Pathol.* 2(3): 144-152



- 24) A.G. Wagura, S.O. Wagai, L.Manguro and **B.M. Gichimu**, 2011. Effects of Selected Plants' Extracts on *In-Vitro* Growth of *Ralstonia solanacearum* (Smith), the Causal Agent of Bacterial Wilt of Irish Potatoes. *Plant Pathol. J.* 20(2): 66-72.
- 25) Onyango B.O., Palapala V.A., Arama P.F., Wagai S.O. and **Gichimu B.M.**, 2011. Morphological characterization of Kenyan native wood ear mushrooms [*Auricularia auricula* (L. ex Hook.) Underw.] and the effect of supplemented millet and sorghum grains in spawn production. *Agric. Biol. J. N. Am.*, 2(3).
- 26) Onyango B.O., Palapala V.A., Arama P.F., Wagai S.O. and **Gichimu B.M.**, 2011. Suitability of Selected Supplemented Substrates for Cultivation of Kenyan Native Wood Ear Mushrooms (*Auricularia auricula*). *American Journal of Food Technology*. Vol. 6:395-403
- 27) **Gichimu B.M.** and Omondi C.O., 2010. Morphological Characterization of Five Newly Developed Lines of Arabica Coffee as Compared to Commercial Cultivars in Kenya. *International Journal of Plant Breeding and Genetics*, 4(4): 238-246, 2010.
- 28) **Gichimu B.M.** and Omondi C.O., 2010. Early Assessment of Growth and Yield Characters of Five Newly Developed Lines of Arabica Coffee in Two Environments and Spacings in Kenya. *African Journal of Horticultural Science* (AJHS), Vol. 3:98-111.
- 29) D.M. Musyimi, G.W. Netondo , B.Owuor and **Gichimu B.M.**, 2010. Growth and Nutrient Uptake among Three Wetland Plant Species Occurring in Lake Victoria Basin in Kenya. *Agriculture and Biology Journal of North America*, 1(3): 250-264.
- 30) **Gichimu, B.M.**, B.O. Owuor and M.M. Dida, 2010. Yield of Three Commercial Watermelon Cultivars in Kenya as Compared to a Local Landrace. *African Journal of Horticultural Science* (AJHS), Vol. 3:24-33.
- 31) **Gichimu B.M.** and Omondi C.O., 2010. Early Performance of Five Newly Developed Lines of Arabica Coffee under Varying Environment and Spacing in Kenya. *Agriculture and Biology Journal of North America*, 1(1): 32-39.
- 32) Kathurima C.W., **Gichimu B.M.**, Kenji G.M., Muhoho S.M. and Boulanger R., 2009. Evaluation of Beverage Quality and Green Bean Physical Characteristics of Selected *Coffea arabica* Genotypes in Kenya. *African Journal of Food Science* Vol 3.(11) pp. 365-371.
- 33) **Gichimu B.M.**, Barack O. Owuor and Mathews M. Dida, 2009. Comparing the yield components of three most popular commercial watermelon cultivars in kenya with one newly introduced cultivar and one landrace. *Journal of Plant Breeding and Crop Science*. Vol.1(4). pp.065-071.
- 34) **Gichimu B.M.**, Barack O. Owuor, Gideon N. Mwai and Mathews M. Dida, 2009. Morphological Characterization of Some Wild and Cultivated Watermelon (*Citrullus* sp.) Accessions in Kenya. *Journal of Agricultural and Biological Science*. Vol. 4, No. 2.
- 35) **Gichimu, B.M.**, B.O. Owuor and M.M. Dida, 2008. Agronomic Performance of Three Most Popular Commercial Watermelon Cultivars in Kenya as Compared to One Newly Introduced Cultivar and One Local Landrace grown on dystric nitisols under sub-humid tropical conditions. *Journal of Agricultural and Biological Sciences*. Vol. 3 No. 5&6.
- 36) **Gichimu, B.M.**, B.O. Owuor and M.M. Dida, 2008. Assessment of Three Most Popular and One Newly Introduced Commercial Watermelon Cultivars in Kenya alongside One Local Landrace for Their Response to Naturally Occurring Diseases, Pests and Non-pathogenic Disorders in Sub-Humid Tropical Conditions. *Journal of Agricultural and Biological Sciences*. Vol. 3 No. 5&6.

#### **PAPERS PRESENTED IN SCIENTIFIC CONFERENCES**

- 1) **Gichimu, B.M.**, Gichuru E.K., Nyende A.B. and Mamati, G.E. (2018). Introgression of *Coffea canephora* Genome in Ruiru 11 Sibs and its Effect on Quality and CBD Resistance. Presented in the 27<sup>th</sup> ASIC Conference held from 16<sup>th</sup> - 20<sup>th</sup> September, 2018 in Portland, Oregon, USA.
- 2) **Gichimu B.M.**, 2014. Coffee Growing in Kenya; Climate Change Challenges and their Mitigation. Presented in the 1st DeKUT International Conference on Science, Technology and Innovation, Nyeri – Kenya, 4<sup>th</sup> to 7<sup>th</sup> November, 2014.

- 3) **Gichimu B.M.**, 2014. Coffee Sustainability in Kenya: Role Played by Improved Varieties. Presented in the 25<sup>th</sup> International Conference on Coffee Science, Armenia – Colombia, 8<sup>th</sup> to 13<sup>th</sup> September, 2014.
- 4) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2014. Combining CBD Resistance with High Yields and Good Cup Quality: Success case in Ruiru 11 Cultivar. Presented in the 25<sup>th</sup> International Conference on Coffee Science, Armenia – Colombia, 8<sup>th</sup> to 13<sup>th</sup> September, 2014.
- 5) Omondi C.O. and **Gichimu B.M.**, 2014. Coffee Variety Development and Expansion of Growing Areas to New Frontiers. Presented during Kenya Coffee @50 Forum (National Coffee Stakeholders Conference), Ruiru, Kenya. 7<sup>th</sup> - 8<sup>th</sup> February 2014.
- 6) **Gichimu B.M.**, 2013. Arabica Coffee Breeding; Challenges Posed by Climate Change. Presented in the 10<sup>th</sup> African Fine Coffee Conference in Kampala Uganda on 16<sup>th</sup> February 2013.
- 7) **Gichimu B.M.**, 2013. Coffee Breeding in Kenya; Achievements, Gaps and Priorities. Presented in the 3<sup>rd</sup> African Coffee Sustainability Forum in Kampala Uganda on 13<sup>th</sup> February 2013.
- 8) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2012. Variation and Associations of Cup Quality traits and CBD Resistance in *Coffea arabica* cv Ruiru 11. Presented in the 12<sup>th</sup> Workshop on Sustainable Horticultural Production in the Tropics, Held at Jaramogi Oginga Odinga University of Science and Technology between 4<sup>th</sup> and 7<sup>th</sup> December 2012.
- 9) **Gichimu B.M.**, 2012. Coffee Breeding in Kenya; Achievements, Challenges and Current Focus. Presented in the 24<sup>th</sup> International Conference on Coffee Science, San Jose – Costa Rica, 11<sup>th</sup> to 17<sup>th</sup> November, 2012.
- 10) **Gichimu B.M.**, 2012. Coffee Breeding Lines in Kenya. Presented in a Conference on "Technologies and best practices for optimal utilization of by-products in the coffee value chain: how to increase sustainability in the coffee supply chain in East African countries" held at Trieste, Italy from 11<sup>th</sup> to 14<sup>th</sup> June 2012 organized by ICS-UNIDO in cooperation with the Ernesto Illy Foundation and illycaffè.
- 11) **Gichimu B.M.**, 2012. Batian Coffee; Its Merits and Demand Trends. Presented during the March 2012 Coffee Research Institute monthly seminar held at Coffee Research Station Lecture Theatre.
- 12) **Gichimu B.M.**, Gichuru E.K., Mamati G.E. and Nyende A.B., 2011. Discrimination of Ruiru 11 Hybrid Sibs based on Raw Coffee Quality. Presented in the 11<sup>th</sup> Workshop on Sustainable Horticultural Production in the Tropics, Held at Pwani University College between 7<sup>th</sup> and 10<sup>th</sup> December 2011.
- 13) Phiri N.A., **Gichimu B.M.**, Gatarayiha C., Kutwayo D., Prakash N., Musoli P., Agwanda C., Kimani M., Musebe R. and Oduor G., 2011. Increasing the resilience of coffee production to Coffee Leaf Rust and other Diseases in India and four other African countries. Presented on 23<sup>rd</sup> March 2011 at ICRAF Complex, Gigiri, Nairobi.
- 14) Kimemia J.K., **Gichimu B.M.** and Kathurima C.W., 2011. Highlights of Batian. A new tall statured and disease resistant Arabica coffee variety with excellent quality. In Kamau et al (Eds), African Fine Coffees Review, Issue No.7. African Fine Coffees Association.
- 15) **Gichimu B.M.** and Phiri N.A., 2010. Response of Newly Developed and Introduced Arabica Coffee Genotypes to *Colletotrichum kahawae*, the Coffee Berry Disease Pathogen, in Kenya. Proceedings of 12<sup>th</sup> Biennial KARI Scientific Conference, KARI Headquarters Complex, Kaptagat Road, Loresho, Nairobi, 8<sup>th</sup> – 12<sup>th</sup> November, 2010.
- 16) S.P. Nayani, Mishra M.K., Dandamudi P., Bhat S.S., Thimmasetty H.B., Subramani D., Reddy S.N., Revanna S.P., Bhat A.M., Murthy M., Harish D.M., Varzea V.M.P., Silva M., Jayarama, Phiri N.A. and **Gichimu B.M.**, 2010. Evaluation of Coffee Varieties Derived From Diverse Genetic Sources of Resistance for Prospective Exploitation - An International Cooperative Effort. Proceedings of 23<sup>rd</sup> International Conference on Coffee Science, Bali – Indonesia, 3<sup>rd</sup> - 8<sup>th</sup> October, 2010.
- 17) **Gichimu B.M.**, Omondi C.O. and Gichuru E.K., 2010. Early Agronomic Performance of Some New and Existing Arabica Coffee Varieties in Kenya. Proceedings of 23<sup>rd</sup> International Conference on Coffee Science, Bali – Indonesia, 3<sup>rd</sup> - 8<sup>th</sup> October, 2010.

- 18) **Gichimu, B.M.** and M.O.A. Onyango, 2007. Non-Chemical Weed Control Practices in Production of Commercial Watermelon (*Citrullus lanatas*) In: *Isutsa et al. (Eds.). 2007. Proceedings of the Seventh HAK Workshop on Sustainable Horticultural Production in the Tropics, held from 28th November to 1<sup>st</sup> December 2007 at the University of Nairobi, Upper Kabete Campus, Kenya.*
- 19) **Gichimu, B.M.** and M.F.O. Ndong'a, 2006. Effects of hot pepper (*Capsicum frutescens*) extracts on aphid's infestation on cowpea (*Vigna unguiculata*). In: *Isutsa et al. (Eds.). 2006. Proceedings of the 5th HAK Workshop on Sustainable Horticultural Production in the Tropics, held from 23rd to 26th November 2005 at Egerton University, Njoro, Kenya. pp. 36-43.*

### **SOME IMPORTANT TRAININGS AND SEMINARS**

- Training Workshop on **Environmental Conservation Awareness** held on 8<sup>th</sup> March, 2018 at University of Embu.
- Training Workshop on **Environmental Audit and Environmental Impact Assessment** held from 21<sup>st</sup> to 22<sup>nd</sup> June, 2017 at University of Embu
- Training Workshop on **Examination Setting, Administration and Processing** held on 22<sup>nd</sup> May, 2017 at University of Embu.
- Training on **ISO 27001:2013 Information Security Management System (ISMS)** Implementation Course facilitated by Maier Consulting Limited from 17<sup>th</sup> to 19<sup>th</sup> May, 2017 at University of Embu.
- Training on **ISO 9001:2015 Quality Management System (QMS)** Implementation Course facilitated by Maier Consulting Limited from 9<sup>th</sup> to 11<sup>th</sup> May, 2017 at University of Embu.
- Training Workshop on **Postgraduate Supervision** held on 13<sup>th</sup> December, 2016 at University of Embu.
- Training Workshop on **Curriculum Development and Implementation in Higher Education** held from 5<sup>th</sup> May, 2016 at University of Embu
- Training Workshop on **Pedagogy and Andragogy (Teaching and Learning in Higher Education)** held from 1<sup>st</sup> to 3<sup>rd</sup> September, 2014 at University of Embu.
- Training seminar on **Patent Drafting and Dispute Resolution** organized by the Kenyatta University from 5<sup>th</sup> to 9<sup>th</sup> August 2013 at Kenyatta University Conference Centre.
- Training seminar on **Implementation of ISO 9001:2008** facilitated by Kenya Bureau of Standards from 20<sup>th</sup> to 22<sup>nd</sup> February 2013 at Coffee Research Institute.
- Training Workshop on **Intellectual Property (IP) Management** held on 29<sup>th</sup> October 2012 at KARI Thika (now Horticultural Research Institute).
- Training seminar on **Drafting, Preparation and Filing of Patent Applications** organized by the Kenya Industrial Property Institute in cooperation with World Intellectual Property Institute from 19<sup>th</sup> to 23<sup>rd</sup> March 2012 at Red Court Hotel, Nairobi, Kenya.
- Training seminar on **ISO 9001:2008 Internal Quality Auditing** facilitated by Kenya Bureau of Standards from 21<sup>st</sup> to 24<sup>th</sup> February 2012 at Coffee Research Institute.
- Training Course on **Molecular and Biochemical Laboratory Techniques** organized by the Department of Biochemistry, University of Nairobi from 15<sup>th</sup> - 26<sup>th</sup> August, 2011.
- Training seminar on **'Theoretical Approaches and Their Practical Application for the Deliberate Release of Genetically Modified Plants'** Organized by the International Centre for Genetic Engineering (ICGEB) and held at Windsor Hotel, Hermanus, South Africa, 22<sup>nd</sup> – 26<sup>th</sup> March, 2010.
- Training seminar on **'Introduction to GMO Biosafety Risk Assessment'** Organized by the Biosafe Train and the International Centre for Genetic Engineering (ICGEB) and held at Kabanyolo, Makerere University, Kampala, Uganda, 19-23 October, 2009.
- Workshop on **'New Analytical Tools for Pharmaceutical and Bio-Chemical Laboratories'** held on 31<sup>st</sup> July 2009 at Holiday Inn, Parklands Road, Westlands, Nairobi, organized by F & S Scientific Ltd
- Workshop on **Financial Management and Reporting of CFC Funded Projects** held between 19<sup>th</sup> and 20<sup>th</sup> May 2009 at CABI Africa.

- Training seminar on **Performance Management** held from 19<sup>th</sup> - 21<sup>st</sup> March 2009 at Utalii Hotel, Nairobi, Kenya. Organized by the department of Public Sector Reforms and Performance Contracting in the office of the Prime Minister.
- Training seminar on **Good Leadership and Supervisory Skills** held from 21<sup>st</sup> - 22<sup>nd</sup> March 2006 at Agrifresh (K) Limited Social Hall
- Training seminar on **Good Hygiene Practices** (Covering Hygiene Supervision and Monitoring Skills) held from 27<sup>th</sup> - 28<sup>th</sup> January 2006 at Agrifresh (K) Ltd Social Hall

### **CURRENT RESEARCH INTERESTS**

Coffee Improvement, Horticulture, Food Security and Climate Change

### **SUPERVISION OF POSTGRADUATE STUDENTS**

<b>Masters Students</b>			
<b>S/No.</b>	<b>Student's Name</b>	<b>Project Title</b>	<b>Status</b>
1.	Ileri Arphaxard Muthee	Production Constraints and Impact of Mycorrhizal Bio-fertilizer on Banana ( <i>Musa spp</i> ) Productivity in Embu County	Graduated in 2019
2.	Murimi Eliud Kagete	Influence of Urban Development on Socio-Economic Livelihoods of Smallholder Farmers in Peri-Urban Areas of Embu Town	Graduated in 2019
3.	Onsongo Susan Kerubo	Selection and Evaluation of Entomopathogenic Fungi Isolate(s) for Management of Melon Fruit Fly ( <i>Zeugodacus cucurbitae</i> )	Graduated in 2019
4.	Daniel Musau Wambua	Economic Analysis of Recommended Technologies on Coffee Performance among Smallholder Farmers in Embu County	Submitted
5.	Marline Hanny Owino	Agronomic Performance, Genetic Diversity and Nutritional Composition of Horned Melon Accessions from Selected Agro-Ecological Zones in Kenya	Intent to Submit
6.	Fridah Aidah Mwakha	Agro-morphological Characterization of <i>Crotalaria spp</i> Accessions and their Ability to Induce Suicidal Germination of <i>Striga</i> seeds.	On-going
7.	Peter Njeru Ileri	Species Composition of Major Pollinators and Pests across Avocado and Cucurbits Production Landscapes in Murang'a County, Kenya	On-going
8.	Grace Wambui Watare	Breeding for Resistance to Bean Common Mosaic Necrosis Virus in French Bean Cultivars in Kenya	On-going
9.	Onkoba Stephen Onyiego	Economic Analysis of the Response of Cabbage Varieties Under Varying Drip Irrigation Schedules in Humic Nitosols of Embu County	On-going
10.	Irene Njura Kiura	Effects of Harvesting Age, Curing Period and Topping Time on Post-Harvest Quality of Red Bulb Onion ( <i>Allium cepa</i> L.)	On-going
11.	Lydia Nyawira Muriithi	Adoption of Smart-Agriculture Technologies Among Smallholder Farmers in Lower Eastern Kenya.	On-going

<b>Doctorate Students</b>			
<b>S/No.</b>	<b>Student's Name</b>	<b>Project Title</b>	<b>Status</b>
1.	Mugao Lydia Gakunyi	<i>Genetic Diversity of Alternaria solani and Phytophthora infestans</i> in Tomato Fields in Mwea, Kenya and their Management using Selected Plant Extracts and Essential Oils	On-going
2.	David Muigai Ngumi	Genetic Diversity of African Sandalwood Provenances in Kenya and Silvicultural Techniques for their Conservation	On-going

## **SUPERVISION OF UNDERGRADUATE STUDENTS**

Have supervised fifteen (15) undergraduate research projects since 2015. Details available on request.

## **POSTGRADUATE PROPOSALS AND THESES EXAMINATION**

1. **Sammy Mwanzia Musyoka (University of Embu, 2016)** – Title of Thesis: “Oil Production Potential of Fast Growing Phytoplankton Species from Lake Naivasha and Water Reservoirs at Embu University College”. Graduated in 2017.
2. **Omondi Joshua Otieno (Maseno University, 2017)** – Title of Thesis: “Assessment of Phenotypic Variation in Morphology, Yield and Seed Quality in Leaf Amaranths in Mumias Sub-County”.
3. **Dennis Kiplimo Gunia (University of Embu, 2019)** – Title of Thesis: “Diversity of Esterase and Lipase Producing Haloalkaliphilic Bacteria from Lake Magadi, Kenya”.
4. **Ngetha Edwin Kihagi (University of Embu, 2019)** – Title of Thesis: Bioprospecting for Cyanophages with Biocontrol Potential against Toxin Producing Cyanobacteria in Lake Magadi, Kenya”
5. **Atiang’ Willis Odhiambo (Great Lakes University of Kisumu, 2019)** – Title of Thesis: An Agronomic and Economic Evaluation of Integrated Soil Fertility Management Options on Maize Yields in Siaya County, Kenya”
6. **Micah Atieno Abura (Great Lakes University of Kisumu, 2019)** – “Determination of Socio-economic Factors Influencing Rice Yields: A Case Study of Ahero Irrigation Scheme, Kisumu County”
7. Have examined numerous PhD and MSc Proposals for Students in Different Departments of University of Embu. Details available on request.

## **PROFESSIONAL AFFILIATION**

**2009 up to date:** Member of Plant Breeders Association of Kenya (PBAK)

**2005 up to date:** Member of Horticultural Association of Kenya (HAK)

## **COUNTRIES TRAVELLED**

Uganda (2), Tanzania (2), Zimbabwe (1), South Africa (1), Indonesia (1), India (2), Ethiopia (1), Italy (1), Costa Rica (1), Colombia (1), USA (1).

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