



CURRICULUM VITAE

PROF. FRANCIS M. MATHOOKO, Ph.D., MBA

**DEPARTMENT OF AGRICULTURAL SCIENCES
MACHAKOS UNIVERSITY
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PROFILE

Prof. Francis M. Mathooko is a Kenyan citizen, holder of ID No. 6051293. He specializes in Agricultural Technology. He holds a Bachelor of Science degree in Food Science and Technology (Upper Second Class Honours), University of Nairobi, Kenya; Master of Science degree in Food Science and Technology, University of Nairobi, Kenya; Ph.D. degree in Agriculture (Food Science and Technology), Okayama University, Japan and a Master of Business Administration degree, University of Nairobi. He is currently a Professor in the School of Agricultural Sciences at Machakos University.

Prof. Mathooko was the Founding Director of the Directorate of Academic Quality Assurance at Jomo Kenyatta University of Agriculture and Technology where he led in the development of the first Academic Quality Assurance Policy. By virtue of his position he participated in various quality training programmes under the auspices of the Inter-University Council for East Africa.

Prof. Mathooko has developed, reviewed and taught various courses at diploma, undergraduate and postgraduate levels in various universities locally and internationally the Department of Food Science and Technology, Department of Horticulture and Department of Human Nutrition at Jomo Kenyatta University of Agriculture and Technology, Sokoine University of Agriculture, University of Zimbabwe, Sokoine University of Agriculture, Kigali Institute of Science, Technology and Management (the present University of Rwanda), Makerere University and University of Zambia among others. He has undertaken considerable research and published articles in high impact factor journals in fields including but not limited to Food Science, Food Processing Technologies, Agro-processing, Agribusiness, Agricultural Extension, Agricultural Value Chain, Postharvest Technology, Postharvest Physiology, Postharvest Molecular Biology, Nutrition, Needs Assessment, Sustainable Food Systems, Agricultural Project Management and Food Security. He has attracted research funds from various local, regional and international funding bodies to support his research activities. He has attended and presented research and invited papers in many local and international meetings. He has participated as a team leader in various research activities in Kenya, Uganda, Tanzania and Zimbabwe.

Based on his research activities, Prof. Mathooko has won several awards including a two-year Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship for Foreign Research in Japan (1997-1999) and was the first Kenyan to win this fellowship, a three-month Association of International Education, Japan Follow-up Research Fellowship, an eight-month JSPS Invitation Fellowship Program for Research in Japan (Long-Term) (April to December 2004) and three weeks Visiting Researcher Fellowships each at University of Zimbabwe, Sokoine

University of Agriculture and Makerere University, respectively. He has training in molecular biology and has conducted research on tissue culture bananas. He has experience in managing research and training programmes funds. He is also involved in research and extension activities in his area of specialization. He has supervised final year and postgraduate (M.Sc. and Ph.D.) students' research projects. He is a founder member and member of the Executive Board of the Food Science and Nutrition Network for Africa (FOSNNA) and also served as the National Coordinator and East African Regional Coordinator of FOSNNA.

Prof. Mathooko has served as an External Examiner at University of Zimbabwe, Sokoine University of Agriculture, Kigali Institute of Science, Technology and Management (the present University of Rwanda), Makerere University and University of Zambia among others.

Prof. Mathooko has previously served as the Founding Principal of Machakos University College and upon award of charter served as Acting Vice-Chancellor of Machakos University, for one year and four and a half months. Prior to his appointment as Principal of Machakos University College, he had served substantively as the Deputy Principal (Academic and Student Affairs) at the then South Eastern University College (SEUCO) for three (3) years and eight (8) months and as Acting Deputy Vice-Chancellor (Academic, Research and Student Affairs) at the South Eastern Kenya University (SEKU) up to 31st October, 2013, a total of eight (8) months. In addition, he previously served as Founding Director, Directorate of Academic Quality Assurance for one (1) two-year term, Ag. Dean, Faculty of Agriculture for one year and as Chairman, Department of Food Science and Technology for two (2) two-year terms, all at JKUAT.

Prof. Mathooko has previously been involved in Academic Quality Assurance activities at SEKU, JKUAT and beyond, and various academic quality assurance initiatives under the auspices of the Commission for University Education and Inter-University Council of East Africa (IUCEA). Further, Prof. Mathooko has experience in fundraising, promotion, design and implementation of academic, research, production and extension activities as well as mobilizing resources and soliciting financial support for capacity building from various stakeholders through proposal development, culminating in establishment of solid partnerships and linkages. For instance, since he joined the then Machakos University College he been able:

1. To solicit for 100 acres of land in the proposed New Machakos City from the Machakos County Government through stakeholder engagement. Letters of allotment have been issued for 45 acres in Phase I.

2. To prepare a proposal which led to acquisition of library resources [40,000 volumes of University-level books and CDs] for all courses on offer at the University worth approximately US\$ 500,000.00.
3. To solicit for a donor and guided the School of Pure and Applied Sciences in proposal development for acquisition of scientific equipment from the US worth about US\$ 170,000.00.
4. To prepare concept notes for five (5) Public-Private-Partnership (PPP) projects for the University which were approved by the Cabinet within a very short time by virtue of their uniqueness and innovativeness as alternate revenue streams.
 - (a) Students Hostels (10,000)
 - (b) Teaching and Referral Hospital
 - (c) Five Star Hotel
 - (d) Staff Houses
 - (e) Expanded Polystyrene (EPS) Building Panels Factory

The above achievements are a clear indication that Prof. Mathooko has excellent managerial, organizational, persuasive, interpersonal and effective communication abilities and skills to manage complex and diverse stakeholders and, also to attract resources for scholarship, research and development.

Prof. Mathooko has been involved in curriculum development and other activities in many universities in the region, such as Makerere University, Uganda; Sokoine University of Agriculture, Tanzania; University of Zimbabwe, Zimbabwe and Kigali Institute of Science, Technology and Management, Rwanda. He has also carried out consultancy/collaborative work in food security with organizations including ICRAF, GTZ, FAO, JICA, RELMA, TSBF, Natural Resources Institute, African Institute for Capacity Development (AICAD) and some food and allied industries. He has been involved in development of FAO Training manuals and served as a Trainer of Trainers for FAO workshops as well as in organization of many local, regional and international training programmes and workshops. Prof. Mathooko has served as a Resource Person in various training programmes including the World Bank- sponsored Technology and Business Development Services (TBDS) Voucher Training Programme entitled “*Processing Technologies for Specific Food Products*” and JICA-funded Third Country Group Training in Applied Food Analysis.

Prof. Mathooko has good interpersonal, writing and communication skills and can get along quite well with people of all cadre, race, age, social status and different nationalities. He is hardworking, committed, resourceful, highly motivated, reliable, responsible, mature, a team player, dedicated, motivated and with a lot of initiative. He is intelligent, academically very strong, and creative and can

undertake many assignments with minimum supervision and produce excellent results. He has good leadership skills, good team builder and worker with ability to influence others positively and get things done to meet strict deadlines, result-oriented, self-driven and motivated with a high need for achievement. I can adapt easily to different environments and culture. Further, he has the ability to meet strict deadlines besides ability to make sound judgements and make effective timely decisions, to be positive and courageous, to seek opportunities to learn and develop and to inspire and influence others and listen to their opinion.

Prof. Mathooko continues to engage in research, student and staff mentorship, training and development of demand-driven academic programmes as well technology transfer and community service with respect to value addition, nutrition, food loss and waste, sustainable food systems, food and nutrition security among others.

1. PERSONAL HISTORY

- 1.1. Full Name: Francis Mutiso Mathooko
1.2. Date of Birth: 1962
1.3. Gender: Male
1.4. Marital Status: Married to Prof. Petronilla M. Mathooko
1.5. No. of Children: Three (Two Sons and One Daughter)
1.6. Nationality: Kenyan
1.7. County: Machakos
1.8. Religion: Christian
1.9. ID Number: 6051293
1.10. Passport Number: BK033249 - issued by the Government of Kenya. Valid up to 27th August 2028.
1.11. Languages Spoken: Kikamba, Kiswahili, English and some little Japanese
1.12. Permanent Address: P. O. Box 1187, Machakos, Kenya
1.13. Present Address: Machakos University
School of Agriculture, Environment and Health Sciences
Department of Agricultural Sciences
P.O. Box 136-90100, Machakos
1.14. Telephone: Residence: 254 – (0)722 – 861239 (Cell)
1.15. E-mail addresses: mmathooko@yahoo.co.uk
mmathooko@mksu.ac.ke
1.16. Present Employer: Machakos University
1.17. Current Academic Post: Professor
1.18. Immediate Past Administrative Positions: Principal, Machakos University College/Ag. Vice Chancellor, Machakos University
1.19. Area of Specialization: Food Science and Technology/
Postharvest Technology [Agricultural Technology]
1.20. Computer Literacy: I am computer literate

2. SECONDARY SCHOOL EDUCATION

- School Attended: Machakos School, Kenya
Dates Attended: From 1976 to 1979
Qualification: Division One (1): 13 Points
Certificate Awarded: East African Certificate of Education (E.A.C.E)

3. HIGH SCHOOL EDUCATION

- School Attended: Kagumo High School, Kenya
Dates Attended: From 1980 to 1981
Certificate Awarded: Kenya Advanced Certificate of Education (K.A.C.E.) - 3 Principals and 1 Subsidiary Pass, 16 Points

4. UNIVERSITY EDUCATION

University: University of Nairobi, Kenya
Dates Attended: From September 1983 to June 1986
Degree Awarded: B.Sc. in Food Science and Technology (Upper Second Class Honours), 1986

5. POSTGRADUATE EDUCATION

5.1. **University:** University of Nairobi, Kenya
Dates Attended: From August 1986 to July 1988
Status: M.Sc. Student
Degree Awarded: M.Sc. in Food Science and Technology

5.2. **University:** Okayama University, Japan
Dates Attended: October 1991 to March 1992
Status: Graduate Research Student

5.3. **University:** Okayama University, Japan
Dates Attended: April 1992 to March 1995
Status: Doctoral Student
Degree Awarded: Ph.D. (Agricultural Technology)

5.4. **University:** University of Nairobi, Kenya
Dates Attended: From September 2011 to December 2013
Status: Master of Business Administration Student
Degree Awarded: Master of Business Administration (MBA) [Strategic Management]

6. SHORT COURSES ATTENDED

6.1. **Venue:** Egerton University, Njoro, Kenya.
Course: F.A.O. Inter-Country Training Workshop in Food, Nutrition and Agriculture for Lecturers from Colleges and Faculties of Agriculture in Eastern and Southern Africa
Dates Attended: From 3rd to 14th April, 1989
Awarded: Certificate of Completion

6.2. **Venue:** Hiroshima University, Japan
Course: Intensive Japanese Language Course
Dates Attended: From April to September 1991
Awarded: Certificate of Completion

6.3. **Venue:** Nairobi Safari Club, Nairobi, Kenya
Course: FAO/Jomo Kenyatta University of Agriculture and Technology Food and Nutrition/Agriculture Training for Trainers
Dates Attended: 2nd to 6th July 2001.

- Awarded:** Certificate of Completion
- 6.4. **Venue:** Centre for Finance and Project Management, Nairobi, Kenya.
Course: Project Monitoring and Evaluation Course
Dates Attended: 30th November to 3rd December 2005.
Awarded: Certificate of Completion.
- 6.5. **Venue:** Imperial Beach Hotel, Entebbe, Uganda.
Course: Inter-University Council of East Africa (IUCEA) Quality Assurance Training
Dates Attended: 6th to 12th July 2008.

7. TEACHING ASSISTANTSHIP

- University:** Okayama University, Japan
Dates: April 1993 – March 1995

Responsibilities

To teach undergraduate students practical aspects related to Food Science and Postharvest Physiology and Technology of horticultural commodities besides guiding them and graduate students (M.Sc. level) in their research projects.

8. CURRENT EMPLOYMENT

- 8.1. **Employer:** Machakos University
Post: Professor – Grade 15
Dates: From 30th May, 2017 to Present Day

Responsibilities

To teach courses in Principles of Food Processing and Preservation, Agricultural Extension, Agribusiness Management, Research Methods, Food and Nutrition Security, Postharvest Systems Management, Strategic Management for Agribusiness, Nutrition, Postharvest Physiology, Postharvest Technology, Sustainable Food Systems, Technical Writing, Research Methods and Project Management in Agriculture and Development to undergraduate and postgraduate students. Supervise undergraduate and postgraduate students' projects, participate in curriculum review and development, carry out mentoring of students and administrative activities and participate in extension and/or outreach activities at community level. Carry out and manage research in diverse disciplines.

9. PAST ADMINISTRATIVE POSITIONS HELD

- 9.1. **Acting Vice-Chancellor – Machakos University –** From 7th October 2016 to 20th February, 2018.

- 9.2. **Founding Principal – Machakos University College – From 30th December 2013 to 6th October 2016.**
- 9.3. **Acting Deputy Vice-Chancellor (Academic, Research and Student Affairs – From 1st March 2013 to 31st October 2013 at South Eastern Kenya University (SEKU).**
- 9.4. **Deputy Principal (Academic and Student Affairs) – From 3rd July 2009 to 28th February 2013 at South Eastern University College (SEUCO).**
- 9.5. **Founding Director – Directorate of Academic Quality Assurance – From June 2007 to June 2009 at Jomo Kenyatta University of Agriculture and Technology.**
- 9.6. **Acting Dean, Faculty of Agriculture – From 4th September 2000 to 23rd May 2001 at Jomo Kenyatta University of Agriculture and Technology.**
- 9.7. **Chairman – Department of Food Science and Technology from 1st October 1999 to September 2003 (Two two-year Terms) at Jomo Kenyatta University of Agriculture and Technology.**

10. MANAGEMENT TRAININGS

- 10.1. **East African Community Programme Accreditation Reviewers and Assessors Training** conducted by The Inter-University Council for East Africa (IUCEA), held at Nairobi Safari Club, Kenya from **29th to 30th May, 2023.**
- 10.2. **Project Finance Techniques: Application and Recent Developments: Training Programme** conducted by the International Law Institute (ILI) - African Centre for Legal Excellence, held at Sopa Lodge, Naivasha, Kenya from **Monday 22nd to Friday 26th May, 2017.**
- 10.3. **Public Finance Management Workshop for Chief Executive Officers of State Corporations, Semi-Autonomous Government Agencies (SAGAs) and Public Funds** - Held at the Kenya School of Government, Lower Kabete on **Monday, 16th January, 2017.**
- 10.4. **Public-Private-Partnership (PPP) Contract Management and Monitoring:** Course conducted by the IP3 Institute, Washington, USA, held at The Great Rift Valley Lodge and Golf Resort, Naivasha held from **18th to 20th May, 2016.**
- 10.5. **Public-Private-Partnership (PPP) P3 Procurement Regulations and Techniques:** Course conducted by the IP3 Institute, Washington, USA, held at The Great Rift Valley Lodge and Golf Resort, Naivasha held from **21st to 23rd April, 2016.**

- 10.6. **Public-Private-Partnership (PPP) Legal Agreements in P3s and Project Finance:** Course conducted by the IP3 Institute, Washington, USA, held at The Great Rift Valley Lodge and Golf Resort, Naivasha held from 21st to 23rd March, 2016.
- 10.7. **Public-Private-Partnership (PPP) Financial Modeling and Risk Assessment:** Course conducted by the IP3 Institute, Washington, USA, held at The Great Rift Valley Lodge and Golf Resort, Naivasha held from 17th to 20th January 2016.
- 10.8. **Public-Private-Partnership (PPP) Foundations of Public-Private-Partnerships Capacity Building:** Course conducted by the IP3 Institute, Washington, USA, held at The Great Rift Valley Lodge and Golf Resort, Naivasha held from 2nd to 6th November. 2015.
- 10.9. **Governance Training through the Induction Training Programme for Boards of State Corporations (MWONGOZO):** Held at Mombasa Continental Resort from 30th November to 2nd December 2015.
- 10.10. Master of Business Administration, University of Nairobi – 2013.
- 10.11. **Strategic Leadership and Change Management Training Organized by QPoint:** Held at Garden Hotel, Machakos from 24th to 25th July, 2013.
- 10.12. **Strategic Leadership and Change Management – Training Workshop for Directors of State Corporations:** Held at the Kenya Institute of Administration from 19th to 20th November, 2010.
- 10.13. **Innovative Strategies for Quality in Higher Education** under the Dialogue of Innovative Higher Education Strategies Programme (DIES) together with the Regional Eastern Africa Network in Higher Education (REAL) in partnership with University of Kassel, Germany **October, 11th 2010** at Norfolk Hotel, Nairobi.
- 10.14. **Public Procurement and Disposal Act (2006):** Training Conducted by The Global Training Institute held from 14th to 15th September, 2010
- 10.15. **Budgeting and Procurement Course** conducted by the Kenya Institute of Management: Held at Merica Hotel, Nakuru from 28th to 30th July 2008.
- 10.16. **Certificate in Project Monitoring and Evaluation Course,** Centre for Finance and Project Management, Nairobi, Kenya, 2005.

11. PREVIOUS EMPLOYMENT

- 11.1. **Employer:** South Eastern Kenya University
Position: Professor
Dates: From May, 2011 to August, 2017

Responsibilities

To teach courses in Food Science, Food Technology, Postharvest Physiology and Postharvest Technology to Diploma, Undergraduate and Postgraduate students, conduct research in these areas, supervise final year B.Sc., M.Sc. and Ph.D. students' projects, undertake administrative duties at the Departmental and University levels, participate in curriculum review and development, and participate in extension and/or outreach activities.

- 11.2. **Employer:** Jomo Kenyatta University of Agriculture and Technology
Position: Professor
Dates: From April 2007 to April 2011

Responsibilities

To teach courses in Food Science, Food Technology, Postharvest Physiology and Postharvest Technology to Diploma, Undergraduate and Postgraduate students, conduct research in these areas, supervise final year B.Sc., M.Sc. and Ph.D. students' projects, undertake administrative duties at the Departmental and University levels, participate in curriculum review and development, and participate in extension and/or outreach activities.

Specific Subjects Taught

Fruits and Vegetables Processing Technology, Sugar and Starch Technology, Dairy Science, Dairy Technology, Postharvest Physiology, Postharvest Technology of Horticultural Crops, Advanced Postharvest Physiology, Food Chemistry, Basics of Nutrition and Food Processing, Principles of Food Processing and Preservation.

- 11.3. **Employer:** Jomo Kenyatta University of Agriculture and Technology
Position: Associate Professor
Dates: From May 2001 to March 2007

Responsibilities

To teach courses in Food Science, Food Technology, Postharvest Physiology and Postharvest Technology to Diploma, Undergraduate and Postgraduate students, conduct research in these areas, supervise final year B.Sc. students and postgraduate students' projects, undertake administrative duties at the Departmental and University levels, participate in curriculum review and development, and participate in extension and/or outreach activities.

- 11.4. **Employer:** Jomo Kenyatta University of Agriculture and Technology
Position: Senior Lecturer
Dates: From June 1996 to April 2001

Responsibilities

To teach courses in Food Science, Food Technology, Postharvest Physiology and Postharvest Technology to Diploma, Undergraduate and Postgraduate students, conduct research in these areas, supervise final year B.Sc. students and postgraduate students' projects, undertake administrative duties at the Departmental and University levels participate in curriculum review and development, and participate in extension and/or outreach activities.

- 11.5. **Employer:** Jomo Kenyatta University of Agriculture and Technology
Position: Lecturer
Dates: From April 1995 to May 1996

Responsibilities

To teach courses in Food Science, Food Technology, Postharvest Physiology and Postharvest Technology, conduct research in these areas, supervise final year students and postgraduate students' projects, undertake administrative duties at the Departmental and University levels and participate in extension and/or outreach activities.

- 11.6. **Employer:** Jomo Kenyatta University of Agriculture and Technology
Position: Assistant Lecturer
Dates: From December 1988 to March 1995

Responsibilities

To teach, conduct research, supervise final year students' projects and participate in extension and outreach activities.

- 11.2. **Employer:** University of Nairobi
Position: Graduate Research Assistant
Dates: From July 1988 to December 1988

Responsibilities

To assist and guide undergraduate students (B.Sc. in Food Science and Technology) during practical sessions in the laboratories and in the Food Processing Pilot Plant besides assisting academic staff members in their research activities.

12. **ADMINISTRATIVE AND OTHER POSITIONS HELD AT JKUAT**

- 12.1. **Founding Director – Directorate of Academic Quality Assurance – From June 2007 to June 2009.**

- 12.2. **Deputy Management Representative** – Spearheaded the University to ISO 9001:2008 Quality management System Certification from 2008 to 2009.
- 12.3. **Member** – Deans Committee – From June 2008 to June 2009.
- 12.4. **Member** – University Training Committee – From June 2008 to June 2009.
- 12.5. **Member** – University Linkages Committee – From June 2008 to June 2009.
- 12.6. **Member** – University Research, Publications and Printing Committee – From June 2008 to June 2009.
- 12.7. **Member** – University Library Committee – From June 2008 to June 2009.
- 12.8. **Member** – Board of Postgraduate Studies – From June 2008 to June 2009.
- 12.9. **Chairman** – Vice Chancellor’s Committee on Internal Quality Assurance of the University Academic Programmes – February to May 2008.
- 12.10. **Chairman** – Vice Chancellor’s Committee on preparation of Draft Academic Quality Assurance Policy – February to May 2008.
- 12.11. **Member** – Senate *Ad Hoc* Committee to Investigate Factors that Lead to Late Commencement of Lectures at the Beginning of each Semester – January to May 2008.
- 12.12. **Chairman** – Vice Chancellor’s Committee to Investigate the Quality of JKUAT Programmes under Continuing Education Programme – September to November 2007.
- 12.13. **Chairman** – University Research Projects Monitoring and Evaluation Committee - 2006 to 2009.
- 12.14. **Member of Editorial Board** – Journal of Agriculture, Science and Technology, JKUAT from 2006 to 2009.
- 12.15. **Acting Dean**, Faculty of Agriculture – From 4th September 2000 to 23rd May 2001.
- 12.16. **Chairman** – **Department of Food Science and Technology** from 1st October 1999 to September 2003 (Two two-year Terms). As a Chairman of the Department I:
- (a) Did all the administrative duties of the Department, including budgeting.

- (b) Oversaw and guided the development and implementation of undergraduate degree programmes and a taught M.Sc. programme in the Department.
- (c) Coordinated and guided the Department in the revision of the syllabus/curriculum for the B.Sc. in Food Science and Postharvest Technology.
- (d) Coordinated, guided and overseen the development and implementation of curriculum for a new B.Sc. in Food Science and Nutrition degree programme.
- (e) Enhanced University – Industry linkages for which I have won four (4) Annual Academic Achievement Awards for students in the Department from:
 - (i) Brooke Bond Kenya Limited
 - (ii) Tetra Pak Limited
 - (iii) BioFoods Limited and
 - (iv) Brookside Dairy Co. Ltd.

12.17. Coordinating Chairman ~ JICA-Sponsored Regional Group Training Programmes – 2001/2002 where my duties were:

- (a) To carry out all administrative duties regarding all the programmes
- (b) Liaising with the University and JICA on issues regarding the welfare of the participants.
- (c) Organizing participants travel schedules and other welfare issues.
- (d) Coordinating Department coordinators and resource persons.
- (e) Ensuring smooth running of all the training programmes.
- (f) Looking for solutions regarding any problem that may arise in the course of the training.
- (g) Overseeing all preparations for the training programmes at, departmental, University and donor levels.

12.18. Coordinator and Manager – Regional Group Training Programme in Applied Food Analysis – 1999 – 2002 (end of Phase II).

12.19. Member – Vice Chancellor’s Senate Standing Sub-Committee on Quality Assurance for JKUAT Academic Programmes.

12.20. Member – Coffee Research Foundation of Kenya/JKUAT MoU Implementation Committee – Charged with the responsibility of drafting syllabi for various agricultural-based training programmes.

12.21. Member – Tea Research Foundation of Kenya/JKUAT MoU Implementation Committee.

12.22. Coordinator – Makerere University/JKUAT MoU Implementation Committee.

- 12.23. **Coordinator** – University of Zimbabwe/JKUAT MoU Implementation Committee.
- 12.24. **Member** - Vice Chancellor's Committee to look into the circumstances that led to closure of the University in June 2000.
- 12.25. **Coordinator/Chairman**– Organizing Committee of a 45-days JICA-Sponsored Regional Group Training in Applied Food Analysis, 1999-2002. As a Chairman and Coordinator, I was charged with:
- (a) Preparation of budget for the training programme.
 - (b) Administration of the funds during the training programme.
 - (c) Overall management of the training programme.
 - (d) Serving as a resource person.
 - (e) Preparation of the final technical and financial reports as well as the proceedings of the training programmes.
- 12.26. **Member** – Faculty of Agriculture Postgraduate Studies Committee from July 1999 to 2003.
- 12.27. **Member** - Vice-Chancellor's Committee on University Staff Welfare (1996/97).
- 12.28. **Chairman** - Faculty of Agriculture *Ad-Hoc* Welfare Committee (1996/97).
- 12.29. **Class Advisor** - 4th Year B.Sc. Class. Main responsibility is to advise the students on their day-to-day academic activities as well as any other non-academic activity, 1995 – 1999.
- 12.30. **Chairman** - Food Processing Workshops Management Committee from June 1995 to September 1999.
- 12.31. **Member** - Syllabus Review Committee from April 1995 to 2009.
- 12.32. **Member** - Organising Committee of the Third Country Regional Group Training in Applied Food Analysis from April 1995 to March 2002.
- 12.33. **Acting Chairman** - Department of Food Science and Postharvest Technology in September 1990.
- 12.34. In 1989 I was responsible for initiation of the commercial production of yogurt among other dairy products in the now Department of Food Science and Technology.
- 12.35. **Member**- University Diploma in Food Technology and B.Sc. in Food Science and Postharvest Technology Syllabus Drafting Committee from 1989 to 1990.

12.36. **Coordinator** - Department of Food Science and Technology Internal and Industrial Attachment Program from February 1989 to March 1991.

12.37. **Member** - University Show Committee from March 1989 to March 1991.

13. RESPONSIBILITIES OUTSIDE THE UNIVERSITY

13.1. NATIONAL LEVEL

13.1.1. **Treasurer** – East African Alumni of the Japan Society for the Promotion of Science – May 2007 to August 2016.

13.1.2. **Member** - National Organizing Committee of the All African Horticulture Congress to be held in Nairobi in April 2009.

13.1.3. **Chairman** – Processed Cereals and Pulses Standards Technical Committee of the Kenya Bureau of Standards from 2000 to 2010

13.1.4. **Chairman** –Fruits and Vegetable Products Standards Technical Committee of the Kenya Bureau of Standards from 1989 to 2010.

13.1.5. **Assistant Secretary** – Kenya Ex-Japan Students Association.

13.1.6. **Chairman** - Organizing Committee of the Second Regional Kenya Institute of Food Science and Technology Conference held from 6th to 7th March 2000, Nairobi, Kenya.

13.1.7. **Reviewer** – Kenya Agricultural Research Institute (KARI)/Agricultural Research Fund (ARF) Research Projects.

13.1.8. **Chairman** – Kenya National Examination Council Diploma and Higher Diploma in Food Technology Examiners' Panel 1990 to 2000.

13.1.9. **Part-Time Lecturer:** To teach Dairy Chemistry and Dairy Technology Units to Third Year B.Sc. (Food Science and Technology) class at the University of Nairobi.

13.1.10. **Part-Time Lecturer:** To teach Dairy Chemistry and Dairy Technology Units to Third Year B.Sc. (Food Science and Technology) class at the University of Nairobi.

13.1.11. **Member** - Organizing Committee of the Third Kenya Institute of Food Science and Technology Conference held from 30th October 1st November 1996 in Nairobi, Kenya.

13.1.12. **Member** - Organizing Committee of the Second Kenya Institute of Food Science and Technology Conference held from 8th to 10th November 1995 in Nairobi, Kenya.

13.1.13. **Member** - Panel for setting, moderating and marking Ordinary Diploma and Higher National Diploma Examinations in Food Technology under the auspices of the Kenya National Examinations Council from 1990 to 2006.

13.2. REGIONAL AND INTERNATIONAL LEVEL

13.2.1. **Resource Person** – Provision of Peer Review Services in Curriculum Evaluation, Academic Institutional Review, Research and Consultancy under the auspices of the Commission for University Education, Kenya. From June 2023 to Present.

13.2.2. **Reviewer and Assessor** – East Africa Community Programme Accreditation under the auspices of the Inter-University Council for East Africa (IUCEA). From May, 2023 to Present

13.2.3. **External Examiner** – Department of Food Science and Technology, University of Zimbabwe, Zimbabwe. From 2010 to 2014.

13.2.4. **Member and Executive Secretary** for the Food Science and Nutrition Network for Africa (FOSNNA) - 2000 to 2018.

13.2.5. **National Coordinator** for the Food Science and Nutrition Network for Africa (FOSNNA) - 2000 to 2010.

13.2.6. **East African Regional Coordinator** for the Food Science and Nutrition Network for Africa (FOSNNA) - 2000 to 2010.

13.2.7. **Member**, National Organizing Committee of the All Africa Horticultural Congress to be held in Nairobi in April 2009.

13.2.8. **Regional Organizer** of the Third Biennial Food Science and Nutrition Network for Africa (FOSNNA) Conference to be held in Ouagadougou, Burkina Faso, 9 – 11th April 2007. I prepared a proposal and Organization for the Prohibition of Chemical Weapons (OPCW) Conference Support Grant and I was awarded US\$ 25,000.00 to sponsor the conference.

13.2.9. **Consulting Editor** - Stewart Postharvest Review – An International Journal based in London, United Kingdom. 2005 to Present Day.

- 13.2.10. **Member of Editorial Board** – Stewart Postharvest Review – An International Journal based in London, United Kingdoms. 2005 to Present Day.
- 13.2.11. **Reviewer:** Documents and papers for promotions to the position of Associate Professor, Department of Food Science and Technology, Sokoine University of Agriculture. So far reviewed papers for: Dr. Nicholas Shayo, Dr. Joyce Kinabo and Dr. Jovin K.M. Mugula.
- 13.2.12. **Organizer and Host**– Fourth Executive Board Meeting of the Food Science and Nutrition Network (FOSNNA) to be held at 680 Hotel in Nairobi, Kenya from 1st to 5th April 2003.
- 13.2.13. **Chairman** ~ Organizing Committee of the Workshop on Regional Collaborative Activities in Eastern, Central and Southern African Regions – Action Plan for Food Security and Safety held at The Stanley Hotel, Nairobi, Kenya, March to April 2000.
- 13.2.14. **Regional Organizer** of the First Biennial Food Science and Nutrition Network for Africa (FOSNNA) Conference held in Dar es Salaam, Tanzania from 12th to 14th February 2002.
- 13.2.15. **Chairman** ~ Organizing Committee of the Workshop on Regional Collaborative Activities in Eastern, Central and Southern African Regions – Action Plan for Food Security and Safety held at The Stanley Hotel, Nairobi, Kenya, March to April 2000.
- 13.2.16. **Visiting Researcher/Lecturer** ~ Makerere University, Uganda – February ~ March 2000.
- 13.2.17. **Visiting Researcher/Lecturer** – Sokoine University of Agriculture, Tanzania – January 2000.
- 13.2.18. **Visiting Researcher/Lecturer** – University of Zimbabwe, Zimbabwe – October 1999.
- 13.2.19. **Regional Organizer** of the First Biennial Food Science and Nutrition Network for Africa (FOSNNA) Conference held in Dar es Salaam, Tanzania from 12th to 14th February 2002.
- 13.2.20. **Referee** for African Journal of Food, Agriculture Nutrition and Development.
- 13.2.21. **External Examiner** – Department of Food Science and Technology, Sokoine University of Agriculture, Tanzania for 3 years from 2000 to 2002.

- 13.2.22. **External Examiner** – Department of Food Science and Technology, Makerere University, Uganda for 3 years from 2001 to 2003.
- 13.2.23. **External Examiner** – Department of Food Science and Technology, Kigali Institute of Science, Technology and Management, Rwanda. **From January 2003 to 2007.**
- 13.2.24. **External Examiner** – Department of Food Science and Technology, University of Zambia, Zambia. **From 2006 to 2008.**
- 13.2.25. **Referee** for African Journal of Food, Agriculture Nutrition and Development.
- 13.2.26. **External Examiner** – Department of Food Science and Technology, Sokoine University of Agriculture, Tanzania for 3 years **from 2000 to 2002.**
- 13.2.27. **External Examiner** – Department of Food Science and Technology, Makerere University, Uganda for 3 years from 2001 to 2003.
- 13.2.28. **External Examiner** – Department of Food Science and Technology, Kigali Institute of Science, Technology and Management, Rwanda. **From January 2003 to 2007.**
- 13.2.29. **Member** – Executive Board of the Food Science and Nutrition Network for Africa (FOSNNA).
- 13.2.30. **Referee** for East African Agriculture and Forestry Journal.
- 13.2.31. **Referee** for Journal of Agriculture, Science and Technology.
- 13.2.32. **Referee** for Australian Journal of Plant Physiology (1997 to 1999).

14. SCHOLARSHIPS AWARDED

- 14.1. **Chandaria Trust Fund Scholarship:** Scholarship awarded to pursue Advanced Level (Higher School Certificate) education at Kagumo High School, Kenya from 1980 to 1981.
- 14.2. **Swiss Technical Cooperation Scholarship:** Scholarship awarded to pursue a Master of Science Degree programme at the Department of Food Technology and Nutrition, University of Nairobi, Kenya from August 1986 to July 1988.

14.3. **Government of Japan Ministry of Education, Science and Culture (Monbusho) Scholarship:** Scholarship awarded to study Japanese Language at the Faculty of Education, Hiroshima University, Japan from April 1991 to September 1991.

14.4. **Government of Japan Ministry of Education, Science and Culture (Monbusho) Scholarship:** Scholarship awarded to pursue a Doctor of Philosophy Degree at the Graduate School of Natural Science and Technology, Okayama University, Japan from April 1992 to March 1995.

15. RESOURCE MOBILIZATION CAPACITY

15.1. Developed a proposal and solicited for 100 acres of land for Machakos University in the proposed New Machakos City from the Machakos County Government through stakeholder engagement. Letters of allotment have been issued for 45 acres in Phase I.

15.2. Developed a proposal which led to acquisition of library resources [40,000 volumes of University-level books and CDs] worth approximately US\$ 500,000.00 from the US-based Books for Africa Organization for all courses on offer at the then Machakos University.

15.3. Developed a proposal together with two members of staff in the the School of Pure and Applied Sciences, Machakos University and won an award for the supply of scientific equipment worth about US\$ 170,000.00 from the US-based Seeding Labs Inc.

15.4. Prepared concept notes for five (5) Public-Private-Partnership (PPP) projects for the Machakos University College which were approved by the Cabinet within a very short time by virtue of their uniqueness and innovativeness as alternate revenue streams.

(a) Students Hostels (10,000 capacity)

(b) Teaching and Referral Hospital

(c) Five Star Hotel

(d) Staff Houses

(e) Expanded Polystyrene (EPS) Building Panels Factory

15.5. Developed a proposal and engaged stakeholders in Masinga Sub-County, Machakos County in resource sharing and mobilization that culminated in the donation of **30 acres** of land to the Machakos University in February, 2018 for establishment of Machakos University Masinga Campus.

16. RESEARCH FUNDS ATTRACTED

- 16.1. Kimatu, J.N., Simba, M., Mwanzia, F.K. and Mathooko, F.M. (2021). Enhancing pigeon pea productivity and climate resilience by implementing the tricot approach and the digital ClimMob platform [K.shs. 29,530,000.00] - Submitted for Funding in 2021 under Kenya Climate Smart Agriculture Project (KCSAP) – Competitive Grants System (CGS).
- 16.2. Mathooko, F.M. (2016). Developed a proposal which led to acquisition of teaching and research library resources [40,000 volumes of University-level books and CDs] worth approximately US\$ 500,000.00 from the US-based Books for Africa Organization for all courses on offer at the then Machakos University.
- 16.3. Muendo, P.N., Okello, V.A. and Mathooko, F.M. (2015). Developed a proposal and won an award for the supply of teaching and research scientific equipment worth about US\$ 170,000.00 from the US-based Seeding Labs Inc.
- 16.4. Kimatu, J.N. and Mathooko, F.M. (2013). Identification of the most aflatoxin-resistant local maize varieties against *Aspergillus flavus* using Kernel Screening Assay (KSA) for South Eastern Kenya region. Preliminary studies. – Australia Awards in Africa Small Grants Scheme, AUS \$ 9,931.00.
- 16.5. JKUAT Research Grant: Grant to undertake research project entitled: Assessment of Postharvest Handling and Value Addition Technologies of Horticultural Food Crops among Small-Holder Farmers in the Arid and Semi-Arid Lands of Eastern Kenya Phase II – 2012 to 2014, [US\$ 40,000.00] [A COLLABORATING RESEARCHER].
- 16.6. JKUAT Research Grant: Grant to undertake research project entitled: Assessment of Postharvest Handling and Value Addition Technologies of Horticultural Food Crops among Small-Holder Farmers in the Arid and Semi-Arid Lands of Eastern Kenya Phase I – 2009 to 2012, [US\$ 60,000.00] [PRINCIPAL INVESTIGATOR INITIALLY BUT NOW A COLLABORATING RESEARCHER].
- 16.7. Kenya Agricultural Productivity Project - Influence of Preharvest Bunch Bagging on the Quality and Postharvest Behaviour of Tissue Culture Banana Fruit – 2008 to 2011, [US\$ 24,000.00] [COLLABORATING RESEARCHER].
- 16.8. JKUAT Research Grant: Grant to undertake research project entitled: Evaluation of I-Methylcyclopropene as a Tool for Extending the Postharvest Storage Life and Quality of Mangoes and Tissue Culture Bananas – 2008 to 2010, [US\$ 60,000.00] [PRINCIPAL INVESTIGATOR].

- 16.9. **Tropical Soil Biology and Fertility (TSBF) Grant** – Grant to conduct Research on the Influence of Inorganic Fertilizers (Macro and Micronutrients) on Yield and Quality Attributes of Tissue Culture Banana (*Musa Spp*) Ratoon Crop – 2007 to 2008, [US\$ 20,000.00] [COLLABORATING RESEARCHER].
- 16.10. **Food Science and Nutrition Network for Africa (FOSNNA) Postgraduate Research Grants** ~ 2006 to 2009, [US\$ 25,000.00] [PRINCIPAL INVESTIGATOR].
- 16.11. **JKUAT Research Grant: Evaluation and Documentation of Indigenous Plants Used in Processing and Preservation of Livestock Products among Pastoral Communities in Kenya** – 2007 to 2008, [US\$ 20,000.00]. [COLLABORATING RESEARCHER].
- 16.12. **JSPS Research Grant** – Grant to conduct collaborative research in Japan under the JSPS Invitation Fellowship for Research in Japan (Long-Term) – April to December 2004, [US\$ 60,000.00] [PRINCIPAL INVESTIGATOR].
- 16.13. **ICRAF/RELMA Research Grant** – Grant to carry out research on the Assessment of Competence Gaps in Linking Agricultural Production with Value Adding and Marketing in Kenya and Ethiopia for Sustainable Rural Livelihood –2003 to 2004, [40,000.00] [PRINCIPAL INVESTIGATOR].
- 16.14. **African Institute for Capacity Development (AICAD) Research Grant** for project entitled ~ “Effective Transmission of food processing skills to the informal small-scale enterprises in Kenya” ~ 2002 – 2005. [US\$ 30,000.00] [PRINCIPAL INVESTIGATOR].
- 16.15. **AIEJ Research Grant** ~ Grant to conduct collaborative research in Japan under the Association of International Education, Japan Follow-up Fellowship – 2003, [US\$ 25,000.00] [PRINCIPAL INVESTIGATOR].
- 16.16. **ISP Grant** – Grant given to coordinate research activities of the Food Science and Nutrition Network for Africa (FOSNNA) – 2001 to 2003, [US\$ 10,000.00] [PRINCIPAL INVESTIGATOR].
- 16.17. **ICRAF** – Grants awarded to carry out collaborative research on fatty and amino acids profile in *marula* fruit from different provenances in Kenya – 2000, [US\$ 20,000.00] [PRINCIPAL INVESTIGATOR].
- 16.18. **JICA Research Grant: Grant awarded for follow-up of ex-participants and to carry out surveillance on postharvest handling of fruits and vegetables in Uganda** – February to March 2000, [US\$ 25,000.00] [PRINCIPAL INVESTIGATOR].
- 16.19. **JICA Research Grant: Grant awarded for follow-up of ex-participants and to carry out surveillance on postharvest handling of fruits and vegetables in Tanzania** – January 2000, [US\$ 25,000.00] [PRINCIPAL INVESTIGATOR].

- 16.20. **JICA Research Grant:** Grant awarded for follow-up of ex-participants and to carry out surveillance on postharvest handling of fruits and vegetables in Zimbabwe – 1999, [US\$ 25,000.00] [PRINCIPAL INVESTIGATOR].
- 16.21. **GTZ-** Funds granted to assess quality of solar-dried mangoes – Case study of women groups in Embu, Mbeere and Kitui districts – 1996/97, [US\$ 20,000.00] [PRINCIPAL INVESTIGATOR].
- 16.22. **Ministry of Education, Science & Culture, Japan (Monbusho) Grant-in-Aid for Scientific Research (No. 97 – 127B)** – Grant awarded as a recipient of the Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship to conduct research on postharvest physiology and technology of fruits and vegetables at Okayama University, Japan – 1998/99 Fiscal Year, [US\$ 100,000.00] [PRINCIPAL INVESTIGATOR].
- 16.23. **Ministry of Education, Science & Culture, Japan (Monbusho) Grant-in-Aid for Scientific Research (No. 97 – 127A)** – Grant awarded as a recipient of the Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship to conduct research on postharvest physiology and technology of fruits and vegetables at Okayama University, Japan – 1997/98 Fiscal Year, [US\$ 100,000.00] [PRINCIPAL INVESTIGATOR].
- 16.24. **JICA Research Grant:** Grant awarded to collect basic information on factors responsible for postharvest losses of fruits and vegetables in the Coastal, Eastern, Central, Western and Rift Valley regions of Kenya – 1996/97, [US\$ 15,000.00] [PRINCIPAL INVESTIGATOR].
- 16.25. **JICA Research Grant:** Grant awarded to study the response of tropical fruits and vegetables to modified atmosphere packaging – 1995/96, [US\$ 100,000.00] [PRINCIPAL INVESTIGATOR].
- 16.26. **JICA Research Grant:** Grant awarded for development of an appropriate storage system for pineapples in Kenya – 1990/91, US\$ 10,000.00] [PRINCIPAL INVESTIGATOR].
- 16.27. **JICA Research Grant:** Grant awarded for establishment of a database for postharvest research activities undertaken in Kenya ~ 1989/90, [US\$ 10,000.00] [PRINCIPAL INVESTIGATOR].

17. AWARDS

- 17.1. 2022 – Awarded Membership to the Kenya National Academy of Sciences.
- 17.2. 1996 ~ Awarded Membership to the American Association for the Advancement of Science in recognition of my standing contribution to the greater scientific community in particular to my research contribution to

the mechanisms involved in the regulation of ethylene biosynthesis and action during postharvest storage fruits and vegetables.

18. FELLOWSHIPS AWARDED

- 18.1. Awarded a Postdoctoral Fellowship for Foreign Researchers by the Japan Society for the Promotion of Science (JSPS) from 1st April 1997 to 31st March 1999 to carry out postdoctoral research in postharvest agriculture at the Faculty of Agriculture, Okayama University, Japan. I was the first Kenyan to win this fellowship.
- 18.2. Awarded an Invitation Fellowship Program for Research in Japan (Long-Term) by the Japan Society for the Promotion of Science (JSPS) from 1st April 2004 to 30th November 2004 to carry out collaborative research in postharvest agriculture at the Faculty of Agriculture, Okayama University, Japan. I was the first Kenyan to win this fellowship.
- 18.3. Awarded the Association of International Education, Japan (AIEJ) Follow-up Research Fellowship from 1st September to 30th November 2003 to carry out research in postharvest agriculture at the Faculty of Agriculture, Okayama University, Japan.

19. RESEARCH EXPERIENCE AND ACTIVITIES

19.1. Previous Research

This is evidenced by the numerous published articles under list of publications in the form of theses, papers in refereed journals, papers in proceedings and technical reports among others.

19.2. Selected Research Activities (2000 to Present)

- 19.2.1. Postharvest Handling and Value Addition Technologies of Food Crops among Small-Holder Farmers in the Arid and Semi-Arid Lands of Eastern Kenya – **Ongoing.**
- 19.2.2. Characterization of the Phytochemical Preservatives and Nutritive Qualities of *Tamarindus indicus* and *Ziziphus abyssinica* A. Rich Herbs – **Completed.**
- 19.2.3. Assessment, Improvement and Development of Mango (*Mangifera indica*) Fruit Postharvest Handling and Value Addition Technologies in Kenya – **Ongoing.**

- 19.2.4. Identification of the most aflatoxin-resistant local maize varieties against *Aspergillus flavus* using Kernel Screening Assay (KSA) for South Eastern Kenya region– **Completed.**
- 19.2.5. Modeling and Process Optimization for Removal of Antinutrients in Selected Green Leafy Vegetables Consumed in Kenya – **Completed.**
- 19.2.6. Influence of Preharvest Bunch Bagging on the Quality and Postharvest Behaviour of Tissue Culture Banana Fruit – **Completed.**
- 19.2.7. Evaluation of 1-Methylcyclopropene as a Tool for Extending the Postharvest Storage Life and Quality of Mango and Tissue Culture Banana Fruits – **Completed.**
- 19.2.8. Influence of Inorganic Fertilizers (Macro and Micronutrients) on Yield and Quality Attributes of Tissue Culture Banana (*Musa Spp*) Ratoon Crop – **Completed.**
- 19.2.9. Physiological and Biochemical Responses of Tissue Culture Banana Fruit to Postharvest Treatment with 1-Methylcyclopropene – **Completed.**
- 19.2.10. Growth Physiology and Quality at Harvest of On-Tree Bagged Mango (*Mangifera indica* L. Cv. Apple) Fruit – **Completed.**
- 19.2.11. Response of On-Tree Bagged Mango (*Mangifera indica* L. Cv. Apple) Fruit to Postharvest Treatment with 1-Methylcyclopropene – **Completed.**
- 19.2.12. Maturity Indices of Tissue Culture Bananas (*Musa Spp.*) Cv. Williams and Grande Nain – **Completed.**
- 19.2.13. Fruit Quality and Postharvest Behaviour of Tissue Culture Banana as Influenced by Inorganic Fertilizers and Micronutrients – **Completed.**
- 19.2.14. Physiology and Physico-Chemical Characteristics of Mango (*Mangifera indica* L.) Fruit Subjected to Water Stress during Phase I of Growth. - Funded by JKUAT. – **Completed.**
- 19.2.15. Postharvest Physiology and Quality Characteristics of Mango (*Mangifera Indica* L.) Fruit Subjected to Water Stress during Phase I of Growth - Funded by JKUAT. – **Completed.**
- 19.2.16. Effective transmission of food processing skills to the informal small-scale enterprises in Kenya – **Completed.**

- 19.2.17. Biochemical and molecular mechanisms of fruit softening - In collaboration with Okayama University, Japan – **Completed.**
- 19.2.18. Application of functional genomes and proteomics to fruit cell wall research – The case of pear fruit. **In collaboration with Okayama University, Japan – Completed.**
- 19.2.19. Enhancement of Farmers' Competence in Linking Agricultural Production with Postharvest Value Addition and Marketing – **Completed.**

20. UNPUBLISHED THESES

- 20.1. Mathooko, F.M. (2013). Response Strategies Adopted by Public Universities in Kenya to Environmental and Managerial Challenges. *MBA Thesis, University of Nairobi, Kenya.*
- 20.2. Mathooko, F.M. (1995). Studies on the Biochemical and Physiological Responses of Fruits and Vegetables to Treatment with Elevated Levels of Carbon Dioxide. *Ph.D. Thesis, Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan.*
- 20.3. Mathooko, F.M. (1989). Stability, Sensory and Storage Properties of Whey-based Beverages Flavoured with Juices from Selected Fruits Available in Kenya. *M.Sc. Thesis, University of Nairobi, Kenya.*

21. LIST OF PUBLICATIONS AND OTHER WRITINGS

21.1. PAPERS IN PEER-REFEREED JOURNALS

- 21.1.1 Wanjala, G.W., Mathooko, F.M., Kutima, P.M. and Mathara, J.M. (2018). Prevalence of Adulteration and Inhibitory Substances in Raw and Pasteurized Milk Marketed in Nairobi Region. *Asian Food Science Journal*, 3(2): 1-8.
- 21.1.2 Karimi, S., Wawire, M. and Mathooko, F.M. (2017a). Impact of frying practices and frying conditions on the quality and safety of frying oils used by street vendors and restaurants in Nairobi, Kenya. *Journal of Food Composition and Analysis* 62: 239–244.
- 21.1.3 Nyaberi, M.O., Onyango, C.A., Mathooko, F.M., Maina, J.M. and Makobe, M. (2017b). Determining efficient extraction procedure of phytochemicals from the fruit paste of *Ziziphus abyssinica* and *Tamarindus indica*. *Journal of Applied Biosciences*. 112: 11045-11051.
- 21.1.4 Wanjala, G.W., Mathooko, F.M., Kutima, P.M. and Mathara, J.M. (2017c). Microbiological Quality and Safety of Raw and Pasteurized Milk Marketed in and Around Nairobi Region.

- 21.1.5 Wawire, M., Oey, I., Mathooko, F.M. Njoroge, C.K., Shitanda, D., Sila, D.N. and Hendrickx, M. (2016). Kinetics of thermal degradation of peroxidase and colour degradation of African cowpea (*Vigna unguiculata*) leaves. *Journal of Food Science. 81: 56-64.*
- 21.1.6 Mathooko, F.M. and Ogutu, M.O. (2015). Porter's five competitive forces framework and other factors that influence the choice of response strategies adopted by public universities in Kenya. *International Journal of Educational Management. 29: 334-354.*
- 21.1.7 Mathooko, F.M. and Ogutu, M.O. (2014a). Coping strategies adopted by public universities in Kenya in response to environmental changes. *Journal of Management and Strategy. 5: 9-17.*
- 21.1.8 Mathooko, F.M. and Ogutu, M.O. (2014b). The extent to which public universities in Kenya experience managerial and environmental challenges. *European Journal of Management and Business. 6: 72-84.*
- 21.1.9 Onyango, C.A., Gakuya, L.W., Mathooko, F.M., Maina, J.M., Nyaberi, M.O., Makobe, M., and Mwaura, F. (2014c). Preservative effect of various indigenous plants on fermented milk from Maasai community of Kajiado County. *Journal of Applied Biosciences. 73: 5935 – 5941.*
- 21.1.10 Onyango, C.A., Gakuya, L.W., Mathooko, F.M., Maina, J.M., Nyaberi, M.O., Makobe, M., and Mwaura, F. (2014d). Phytochemical studies on herbal plants commonly used for processing and preserving meat and milk. *Journal of Applied Biosciences. 73: 5942 – 5948.*
- 21.1.11 Musyimi, S.M., Sila, D.N., Okoth, E.M., Onyango, C.A. and Mathooko, F.M. (2014e). Production and characterization of wine from mango fruit (*Mangifera indica*) varieties in Kenya. *Journal of Agriculture, Science and Technology. 16: 3-19.*
- 21.1.12 Onyango C.A., Ochanda, S.O., Mwanjala M. A., Ochieng, J. K. and Mathooko F. M. and Kinyuru, J.N. (2013a). Effects of malting and fermentation on anti-nutrients reduction and protein digestibility of red sorghum, white sorghum and pearl sorghum. *Journal of Food Research. 2: 41-49.*

- 21.1.13 Musyimi, S.M., Sila, D.N., Okoth, E.M., Onyango, C.A. and Mathooko, F.M. (2013b). The influence of process optimization on the fermentation profile of mango wine prepared from the Apple mango variety. *Journal of Animal and Plant Sciences*. 17(3): 2600-2607.
- 21.1.14 Okoth, E.M., Sila, D.N., Onyango, C.A., Owino, W.O., Musembi, S.M. and Mathooko F.M. (2013c). Evaluation of physical and sensory quality attributes of three mango varieties at three stages of ripeness, grown in lower Eastern Province of Kenya - Part 1. *Journal of Animal and Plant Sciences*. 17(3): 2608-2618.
- 21.1.15 Okoth, E.M., Sila, D.N., Onyango, C.A., Owino, W.O., Musyimi, S.M. and Mathooko F.M. (2013d). Evaluation of chemical and nutritional quality attributes of selected mango varieties at three stages of ripeness, grown in lower Eastern Province of Kenya – Part 2. *Journal of Animal and Plant Sciences*. 17(3): 2619-2630.
- 21.1.16 Onyango C.A., Ochanda, S.O., Mwanjala M. A., Ochieng, J. K. and Mathooko F.M. (2012d). Development of an instant breakfast cereal from optimized flours of red and white sorghum and pearl millet. *Journal of Applied Biosciences*. 51: 3559 – 3566.
- 21.1.17 Onyango, C.A., Nyaberi, M.O., Mathooko, F.M., Maina, J.M., Makobe, M. and Mwaura, F. (2012b). Evaluation of *Ziziphus abyssinica* fruit paste as used by the pastoral community of West Pokot, Kenya for the preservation of fresh pork sausages. *Journal of Animal and Plant Sciences*, 13: 1781- 1790.
- 21.1.18 Wawire, M., Oey, I., Mathooko, F.M. Njoroge, C.K., Shitanda, D., Sila, D.N. and Hendrickx, M. (2012c). Effect of harvest age and thermal processing on poly- γ -glutamate folates and minerals in African cowpea leaves (*Vigna unguiculata*). *Journal of Food Composition and Analysis*. 25: 160-165.
- 21.1.19 Wawire, M., Oey, I., Njoroge, C.K., Shitanda, D., and Hendrickx, M., Mathooko, F.M. (2011). Thermal stability of ascorbic acid and ascorbic acid oxidase in African cowpea leaves (*Vigna unguiculata*) of different maturity. *Journal of Agricultural and Food Chemistry*, 59: 1774-1783.
- 21.1.20 Muchui M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M., Onyango, C.A. and Kimani, E.M. (2010a). Effect of perforated blue polyethylene bunch covers on selected postharvest quality parameters of tissue-cultured bananas (*Musa* spp.) cv. Williams in Central Kenya. *Journal of Stored Products and Postharvest Research*, 1(3): 29 – 41.

- 21.1.21 Ochanda, S.O., Onyango, C.A., Mwasaru, M.A., Ochieng, J.K., Mathooko, F.M. (2010b). Effects of alkali treatment on tannins and phytates in red sorghum, white sorghum and pearl millet. *Journal of Applied Bioscience*, **36**: 2409-2418.
- 21.1.22 Mathooko, F.M. (2010c). Challenges and Opportunities in Postharvest Horticulture Research and Training in Developing Countries – The Case of Kenya”. *Acta Horticulturae*.
- 21.1.23 Nyaberi, M.O., Onyango, C.A., Mathooko, F.M., Maina, J.M., Makobe, M. and Mwaura, F. (2010d). Bioactive fractions in the stem charcoal of *Ozoroa insignis* used by the pastoral communities in West Pokot to preserve milk. *Journal of Applied Biosciences*, **26**: 1653-1658.
- 21.1.24 Nyaberi, M.O., Onyango, C.A., Mathooko, F.M., Maina, J.M., Makobe, M. and Mwaura, F. (2010e). Evaluation of phytochemical, antioxidant and antibacterial activity of edible fruit extracts of *Ziziphus abyssinica* A. Rich. *Journal of Animal and Plant Sciences*, **6**: 623- 629.
- 21.1.25 Abong, G.O. Okoth, M.W., Karuri, E.G., Kabira, J.N. and Mathooko, F.M. (2009a). Influence of potato cultivar and stage of maturity on oil content of French fries (chips) made from eight Kenyan potato varieties. *African Journal of Food, Agriculture, Nutrition and Development*, **9(8)**: 1668-1682.
- 21.1.26 Mathooko, F.M., Runkua, J.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2009b). Preharvest mango (*Mangifera indica* L. Cv. Apple) fruit bagging controls lenticel discolouration and improves postharvest quality. *Acta Horticulturae*.
- 21.1.27 Akande, E.A., Adegoke G.O. and Mathooko, F.M. (2009c). Production and quality of tea flavoured with wild pepper (*Erythrococca anomala* Benth) seeds powder. *Journal of Applied Sciences*, **12**: 8148-8154.
- 21.1.28 Abong, G.O. Okoth, M.W., Karuri, E.G., Kabira, J.N. and Mathooko, F.M. (2009d). Nutrient content of raw and processed products from Kenyan potato cultivars. *Journal of Applied Biosciences*, **16**: 877-886.
- 21.1.29 Abong, G.O. Okoth, M.W., Karuri, E.G., Kabira, J.N. and Mathooko, F.M. (2009e). Evaluation of selected Kenyan potato cultivars for proceeding into French fries. *Journal of Animals and Plant Sciences*, **2(3)**: 141-147.

- 21.1.30 Abong, G.O. Okoth, M.W., Karuri E.G., Kabira, J.N. and Mathooko, F.M. (2009f). Levels of reducing sugar in eight Kenyan potato cultivars as influenced by stage of maturity and storage conditions. *Journal of Animals and Plant Sciences*, 2(2): 76-84.
- 21.1.31 Akande E.A. Adegoke G.O. and Mathooko, F.M. (2009g). Some Physical and Nutritional Characteristics of the seed of wild pepper (*Erythrococca anomala*) Seeds. *Pakistan Journal of Scientific and Industrial Research*, 51 (3): 128-130.
- 21.1.32 Akande E.A. Adegoke G.O. and Mathooko, F.M. (2009h). Production and Quality Evaluation of Tea Flavoured with Wild Pepper (*Erythrococca anomala*) Seeds. *Journal of Science, Engineering and Technology*, 15(4): 254-265.
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- 21.3.42 Onyango, C.A., Mathooko, F.M. and Koaze, H. (1995). Effect of wilting during storage on ascorbic acid and chlorophyll content in some leafy vegetables commonly consumed in Kenya. *In: Proceedings of the First Kenya Institute of Food Science and Technology Conference, Nairobi, Kenya, Nov. 7-9, 1994. Eds. N.K.O. Ojijo, F.M. Mathooko, H. Koaze and L.E. Wongo, pp. 86-92. ISBN 9966-923-36-5.*
- 21.3.43 Mathooko, F.M. (1994). Examinations in Diploma and Degree Courses in Food Science and Postharvest Technology at Jomo Kenyatta University of Agriculture and Technology. *In: Proceedings of the East African Inter-University Council/Swiss Development Cooperation Workshop on Food Science Subject (27th to 31st August, 1990) Arusha, Tanzania. Eds. S.K. Mbugua and K. Mkingilima. pp. 51-58.*
- 21.3.44 Mathooko, F. M. and Koaze, H. (1991). Postharvest handling of perishable food crops in Kenya - The present situation and future prospects. *In: Proceedings of a National Seminar on Technological Solutions for Economic Development in Kenya - Now and 21st Century. pp. 477- 489.*

21.4. TECHNICAL REPORTS

- 21.4.1. Mathooko, F.M., Wakhungu, J.W. and Onyango, C.A. (2005). Competence Gaps in Linking Agricultural Production with Value Adding and Marketing in Kenya. ACTS Press, Nairobi, Kenya, ISBN 9966-41-135-6.
- 21.4.2. Mathooko, F.M. (2004a). Biochemical and Molecular Approaches in Understanding the Role of β -Galactosidase and α -Arabinofuranosidase in Pear Fruit Growth and Ripening. Technical Report Submitted to the Japan Society for the Promotion of Science (JSPS).
- 21.4.3. Mathooko, F.M. and Onyango, C.A. (2004b). Assessment of Competence Gaps in Linking Agricultural Production with Value Adding and Marketing in Kenya for Sustainable Rural Livelihood – ICRAF/RELMA Technical Report.

- 21.4.4. **Mathooko, F. M.** and Waigi, G. (2004c). Effective Transfer of Food Processing Skills to the Informal Small Enterprises. **AICAD Technical Report.**
- 21.4.5. **Mathooko, F.M.** (2003). Biochemical and Molecular Mechanisms Involved in Pear (*Pyrus communis* L.) Fruit Softening. **Technical Report Submitted to the Association of International Education of Japan.**
- 21.4.6. **Mathooko, F.M.**, S.N. Muhoho, H. Koaze, H., N.B. Shayo, A.B. Gidamis and E.E. Maeda (2000a). Surveillance on Postharvest Handling of Fresh Fruits and Vegetables Part III – Case Study of Tanzania. **Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.
- 21.4.7. Shayo, N.B., Maeda, E.E., Gidamis, A.B., Muhoho, S.N., **Mathooko, F.M.** and Koaze H. (2000b). Report on Regional Technical Cooperation Promotion Activities between the Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology and the Department of Food Science and Technology, Sokoine University of Agriculture, Tanzania and Follow-up of Ex-Participants, **JICA Technical Report.**
- 21.4.8. **Mathooko, F.M.**, C. Kiiyukia, H. Koaze, W.M. Kyamuhangire, A.N. Kaaya and J.K. Kikafunda (2000c). Surveillance on Postharvest Handling of Fresh Fruits and Vegetables Part IV – Case Study of Uganda. **Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.
- 21.4.9. Kyamuhangire, W., Kaaya, A.N., Sserunjogi, M.L., Kikafunda, J.K., Kiiyukia, C., **Mathooko, F.M.** and Koaze H. (2000d). Report on Regional Technical Cooperation Promotion Activities between the Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology and the Department of Food Science and Technology, Makerere University, Uganda and Follow-up of Ex-Participants **JICA Technical Report.**
- 21.4.10. **Mathooko, F.M.**, Muhoho, S.N., Kiiyukia, C. and Koaze, H. (2000e). Final Report of Workshop on Regional Collaborative Activities in Eastern, Central and Southern African Regions – Action Plan for Food Security and Safety. **JICA Technical Report.**
- 21.4.11. Thiong'o, M., Kingo'ri, S., Jaenicke, H., **Mathooko, F.M.**, Kenji, G.M. and Muhoho, S.N. (2000f). Characterization of lipids in Kenyan marula (*Sclerocarya birrea*) seed oil from different

provenances. **ICRAF/JKUAT Collaborative Research Project Report.**

- 21.4.12. **Mathooko, F.M. (1999a).** Physiological, Biochemical and Molecular Characterization of Fruit Responses to Inhibitors of Ethylene Action. **Technical Report Submitted to the Japan Society for the Promotion of Science (JSPS).**
- 21.4.13. Muyanga, E.M. and **Mathooko, F.M. (1999b).** Solar Drying of Mango Fruit: A case study of women groups in Embu and Mbeere districts, Kenya. **GTZ Report.**
- 21.4.14. **Mathooko, F.M., H. Koaze, H., T. Beta and P. Zharare (1999c).** Surveillance on Postharvest Handling of Fresh Fruits and Vegetables Part II – Case Study of Zimbabwe. **Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.
- 21.4.15. Beta, T., Zharare, P., **Mathooko, F.M.** and Koaze H. (1999d). Report on Regional Technical Cooperation Promotion Activities between the Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology and Institute of Food, Nutrition and Family Sciences, University of Zimbabwe and Follow-up of Ex-Participants, **JICA Technical Report.**
- 21.4.16. Abe, K., **Mathooko, F.M.**, Kiiyukia, C., Mwaniki, M.W., Muigai, C.W. and Koaze, H. (1997). Surveillance of Postharvest Handling of Perishable Food Crops Part I – Case Study of Kenya. **JICA Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.
- 21.4.17. Onyango, C.A., Koaze, H. and **Mathooko, F.M.** (1992). Effect of wilting during storage on the ascorbic acid (vitamin C) and chlorophyll contents in leafy vegetables commonly consumed in Kenya: **JICA Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.
- 21.4.18. Koaze, H. and **Mathooko, F.M.** (1991). Postharvest handling methods of food crops in Kenya: **JICA Technical Report** - Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.

21.5. **EDITED PROCEEDINGS/TRAINING MANUALS AND REPORTS**

- 21.5.1. **Mathooko, F. M.**, Ojijo, N.K.O., Mwasaru, M.A., Kenji, G.M., Kiiyukia, C. and Njoroge, S.M. (2002a). Training Manual for the Tenth Regional Group Training in Applied Food Analysis.
- 21.5.2. **Mathooko, F.M.**, Onyango, C.A. and Njoroge, S.M. (2002b) Proceedings of the Tenth Regional Group Training Programme on Applied Food Analysis. Nairobi, Kenya.
- 21.5.3. **Mathooko, F.M.**, Mwasaru, M.A. and Njoroge, S.M. (2001a) Proceedings of the Ninth Regional Group Training Programme on Applied Food Analysis. Nairobi, Kenya. ISBN 9966 – 923 – 14 – 4.
- 21.5.4. **Mathooko, F. M.**, Onyango, C.A., Njoroge, S.M., Mwasaru, M.A., Kenji, G.M., Kiiyukia, C. and Ojijo, N.K.O. (2001b). Training Manual for the Ninth Regional Group Training in Applied Food Analysis. ISBN 9966 – 26 – 8.
- 21.5.5. **Mathooko, F.M.**, S. N. Muhoho, C. Kiiyukia and H. Koaze (2000a). Proceedings of Workshop on Regional Collaborative Activities in Eastern, Central and Southern African Regions – Regional Action Plan for Food Security and Action, Nairobi, Kenya.
- 21.5.6. **Mathooko, F.M.**, Njoroge, S.M., Onyango, C.A., Mathara, J.M. and Koaze, H. (2000b). Final Report on the Eighth Regional Group Training in Applied Food Analysis, Nairobi, Kenya.
- 21.5.7. **Mathooko, F.M.**, Onyango, C.A., Njoroge, S.M. and Kenji, G.M. (2000c). Proceedings of the Third Regional Kenya Institute of Food Science and Technology Conference, Nairobi, Kenya. ISBN 9966-923-02-0.
- 21.5.8. **Mathooko, F. M.**, L. E. Wongo, H. Koaze, P. M. Kutima and C. Kiiyukia. (1997). Proceedings of the Fourth Regional Group Training Programme on “Applied Food Analysis” ISBN 9966-923-72-1.
- 21.5.9. **Mathooko, F. M.**, S.M. Njoroge and H. Koaze. (1997). Final Report on the Fourth Regional Group Training in Applied Food Analysis. JICA Report.
- 21.5.10. **Mathooko, F. M.**, L. E. Wongo, H. Koaze, P. M. Kutima and C. Kiiyukia. (1996). Final Report on the Fourth Regional Group Training in Applied Food Analysis. JICA Report.
- 21.5.11. **Mathooko, F.M.**, S.M. Njoroge and H. Koaze (1996). Proceedings of the Second Kenya Institute of Food Science and Technology Conference. ISBN 9966-923-48-9.

- 21.5.12. Ojijo, N.K.O., F.M. Mathooko, H. Koaze and L.E. Wongo. (1995). Proceedings of the First Kenya Institute of Food Science and Technology Conference. ISBN 9966-923-36-5.

21.6. UNIVERSITY LEVEL BOOKS PUBLISHED

- 21.6.1. Mathooko, J.M., Mathooko, F.M. and Mathooko, P.M. (2007). Academic Proposal Writing: A Guide to Preparing Proposals for Academic Research. Amu Press, ISBN 9966-923-53-5.
- 21.6.2. Mathooko, J.M., Mathooko, F.M. and Mathooko, P.M. (2011). Academic Proposal Writing. Second Edition. Danse Agencies, Nairobi, Kenya, ISBN 9978-9-966-21043-2.

22. ATTENDANCE AND PRESENTATIONS AT SCHOLARLY MEETINGS (2006 – PRESENT DAY) (PRESENTATIONS BEFORE 2006 = 62)

- 22.1. Attended an Association of African Universities Webinar - Demonstration of Different Software, Platforms and Applications Used to Teach Practical Oriented Disciplines Online Virtual Workshop, 14th April, 2021.
- 22.2. Attended a Coursera for Campus Webinar - Embedding employability skills within higher education institutions – the future of study in Africa, 24th March 2021.
- 22.3. Attended various Webinar on e-learning teaching in 2020 - 2021.
- 22.4. Attended the First Biennial Conference on Higher Education in Kenya held at Kenyatta University, Kenya from 22nd to 25th August 2016.
- 22.5. Attended National Stakeholders Workshop on Rating/Ranking Criteria for Universities in Kenya Held at the Kenya School of Monetary Studies, 19th September 2012.
- 22.6. Wawire, M., Mathooko, F.M. Oey, I., Njoroge, C.K., Shitanda, D., Hendrickx, M., (2011). Stability of ascorbic acid oxidase in African cowpea (*Vigna unguiculata*) leaves at different maturity stages. Paper presented at the "US-NZ Science and Technology Workshop on Postharvest Innovation for Safe, more Attractive and Nutritious Horticultural Produce", Dunedin, New Zealand, 23rd – 25th August 2011.
- 22.7. Wawire, M., Mathooko, F.M., Njoroge, C.K. and Shitanda, D. (2011). Evolution and stability of ascorbic acid oxidase in African cowpea (*Vigna unguiculatta*) leaves of different maturities and grown under different conditions. Paper presented at the ITROMID Conference held at Jomo

Kenyatta University College of Agriculture and Technology from 19th to 20th May 2011.

- 22.8. Mathooko, F.M. (2010a). Research Trends, Challenges and Opportunities in Linking the Agriculture Production Value Chain for Enhanced Food Security in Sub-Saharan Africa. *Paper presented at the Workshop on “The Right to Adequate food and Nutrition: Implications for Food Science and Nutrition Education, Public Policy, Food Fortification and Distribution Activities in Africa” held from October 7-9, 2010 at Addis Ababa University, Ethiopia.*
- 22.9. Mathooko, F.M. (2010b). Challenges and Opportunities in Postharvest Horticulture Research and Training in Developing Countries – The Case of Kenya”. *Paper presented at the 28th International Horticultural Congress (IHC) held at the Lisbon Congress Centre in Lisbon, Portugal from 22nd to 27th August 2010.*
- 22.10. Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Onyango, C.A. and Kahangi, E.M. (2010c). Effect of Preharvest Polyethylene Bunch Covers on Postharvest Quality and Behaviour of Tissue Cultured Banana (*Musa* spp. Cv. William). *Paper presented at the 28th International Horticultural Congress (IHC) held at the Lisbon Congress Centre in Lisbon, Portugal from 22nd to 27th August 2010.*
- 22.11. Mathooko, F.M. (2010d). Research Opportunities for Young Researchers. *Paper presented at the Modernizing Local Sustainable Technologies as the Engine for Sustainable Development Symposium held at the Safari Park Hotel, Nairobi from 25th to 26th February 2010.*
- 22.12. Runkua, J.M and Mathooko, F.M. (2009a). *On-tree fruit bagging for fruit disease and pest control. Paper presented at The All Africa Horticultural Conference held at Safari Park Hotel, Nairobi Kenya from 31st August to 3rd September 2009.*
- 22.13. Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M. and Onyango C.A. (2009b). Effect of bunch covers on postharvest quality of tissue-cultured bananas (*Musa* spp.) cv. 'Grande Naine'. *Paper presented at The All Africa Horticultural Conference held at Safari Park Hotel, Nairobi Kenya from 31st August to 3rd September 2009.*
- 22.14. Onyango, C.A., Gakuya, L.W. Mathooko, F.M., Maina, J.M., Makobe, M. and Mwaura, F. (2009c). Chemical composition and phytochemical studies on herbal plants commonly used for processing and preservation of meat and milk by the Maasai community in Kajiado district. *Paper presented at an International Conference on the Strengthening of Research and Higher Education in Basic Sciences by Regional and Interregional Cooperation: Relevance for Developing Countries held at the UN Conference Centre, Addis Ababa from 1st to 4th September 2009.*

- 22.15. Onyango, C.A., Gakuya, L.W. **Mathooko, F.M.**, Maina, J.M., Makobe, M. and Mwaura, F. (2009d). Antimicrobial and antioxidant activity and toxicity of selected herbal plants commonly used in milk processing and preservation by the Maasai community of Kajiado district. *Paper presented at an International Conference on the Strengthening of Research and Higher Education in Basic Sciences by Regional and Interregional Cooperation: Relevance for Developing Countries held at the UN Conference Centre, Addis Ababa from 1st to 4th September 2009.*
- 22.16. Akande, E.A., **Mathooko, F.M.**, Adegoke, G.O. and Abioye, V.F. (2009e). Preservative potential of extracts from wild pepper (*Erythrococca anomala* Benth) seeds. *Paper presented at an International Conference on the Strengthening of Research and Higher Education in Basic Sciences by Regional and Interregional Cooperation: Relevance for Developing Countries held at the UN Conference Centre, Addis Ababa from 1st to 4th September 2009.*
- 22.17. Akande, E.A., **Mathooko, F.M.**, Adegoke, G.O. and Abioye, V.F. (2009f). Identification of volatile and bioactive compounds in wild pepper (*Erythrococca anomala* Benth) seeds. *Paper presented at an International Conference on the Strengthening of Research and Higher Education in Basic Sciences by Regional and Interregional Cooperation: Relevance for Developing Countries held at the UN Conference Centre, Addis Ababa from 1st to 4th September 2009.*
- 22.18. Mwaniki, M.W., **Mathooko, F.M.**, Ushijima, K., Nakano, R. and Kubo, Y. (2009g). Application of yeast screen trap strategy for identification of secretomes associated with cell wall modifications during pear fruit ripening and development. *Paper presented at the First ISHS International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions held at Crowne Plaza Hotel, San Jose, Costa Rica from 20th to 24th July 2009.*
- 22.19. **Mathooko, F.M.**, Runkua, J.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2009h). Preharvest mango (*Mangifera indica* L. Cv. Apple) fruit bagging controls lenticel discolouration and improves postharvest quality. *Paper presented at the First ISHS International Conference on Postharvest and Quality Management of Horticultural Products of Interest for Tropical Regions held at Crowne Plaza Hotel, San Jose, Costa Rica from 20th to 24th July 2009.*
- 22.20. Muchui M.N., **Mathooko F.M.**, Njoroge C.K., Kahangi E.M., Onyango C.A., Kimani, E., Wepukhulu, S.B., Van Lauwe B. and Jefwa J. (2008a). Effect of bunch covers on postharvest quality of tissue cultured bananas (*Musa* spp.) cv. Williams. *Paper presented at the 8th Workshop on Sustainable Horticultural Production in the Tropics: Value Chain of Fruits for Local Market, Export and Processing held at Masinde Muliro University of Science and Technology, Kakamega, Kenya from 8th to 11th December 2008.*

- 22.21. Runkua, J.M., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008b). On-tree fruit bagging controls lenticel discolouration and improves mango (*Mangifera indica* L. cv. Apple) fruit quality. *Paper presented at the 8th Workshop on Sustainable Horticultural Production in the Tropics: Value Chain of Fruits for Local Market, Export and Processing held at Masinde Muliro University of Science and Technology, Kakamega, Kenya from 8th to 11th December 2008.*
- 22.22. Gakuya, M.W., Onyango, C.A., Mathooko, F.M. and Maina, J.M. (2008c). Phytochemical constituents of herbal plants commonly used in food processing and preservation by the Maasai community in Kajiado district. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.23. Madigu, N.O., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008d). Influence of water deficit on the physiology and physico-chemical characteristics of mango (*Mangifera indica* L.) fruit during growth and development. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.24. Madigu, N.O., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008e). Comparison of the postharvest physiology and biochemistry of mango (*Mangifera indica* L.) fruit under irrigated and non-irrigated conditions. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.25. Miriti, J.K., Njoroge, C.K., Mathooko, F.M., Losenge, T., Jefwa, J., Omo, O., and Vanlauwe, B. (2008f). Effects of inorganic fertilizers on yield of tissue culture bananas (*Musa* spp. cv. Giant cavendish) ratoon crop. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.26. Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M., Onyango, C.A. and Kimani E.M. (2008g). *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.27. Runkua, J.M., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008h). *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and*

Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.

- 22.28. Nyaberi, M.O., Onyango, C.A., Mathooko, F.M. and Maina, J.M. (2008i). Evaluation of antibacterial activity, phytochemical and antioxidants of edible fruit extracts of *Tamarindus indica* for meat preservation. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.29. Gakuya, M.W., Onyango, C.A., Mathooko, F.M. and Maina, J.M. (2008j). Antimicrobial and antioxidant activity of selected herbal plants commonly used in milk processing and preservation by the Maasai community of Kajiado district. *Paper presented at the 2008 JKUAT Scientific, Technological and Industrialization Conference: Scientific and Technological Solutions for Sustainable Industrialization and Socio-Economic Growth held at AICAD, Nairobi from 4th to 5th December 2008.*
- 22.30. Imbuga, M.O. and Mathooko, F.M. (2008k). Enhancing quality of university training through academic linkages. *Paper presented at the Mt. Kenya University stakeholders consultative workshop held at Mt. Kenya University, Thika on 5th December 2008.*
- 22.31. Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M., Onyango C.A., Kimani, E., Wepukhulu, S.B., Van Lauwe B. and Jefwa J. (2008l). Effect of inorganic fertilizers and micronutrients on the keeping quality of tissue culture bananas (*Musa* sp.) cv. Giant Cavendish. *Paper presented at the 11th KARI Biennial Scientific Conference and the 3rd Agricultural Forum held at the KARI Headquarters, Nairobi, Kenya from 10 to 14th November 2008.*
- 22.32. Attended the Commission for Higher Education Workshop on Developing High Quality Academic Practice in Learning and Teaching in Higher Education in Kenya and East Africa held at the Kenya School of Monetary Studies, Nairobi from 9th to 10th October 2008.
- 22.33. Akande E.A., Mathooko, F.M., Adegoke G.O and Akintunde, A.K. (2008m) Preservative potentials of wild pepper (*Erythrococca anomala*) seeds extracts on pineapple juice. *Paper presented at the 32nd Annual National Conference of the Nigerian Institute of Food Science and Technology, Nigeria.*
- 22.34. Mathooko, F.M. (2008n). Genetically modified organisms and food security in Africa. *Paper presented at the Sub-Saharan Africa Regional Workshop on Food Education, Security and Social Perspective held in Addis Ababa, Ethiopia from 6th to 8th October 2008.*

- 22.35. Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M. and Onyango, C.A. (2008o). Determination of maturity indices of tissue culture banana (*Musa spp.*) c.v. Williams and Grand Naine. *Paper presented at the Banana and Plantain in Africa: Harnessing International Partnerships to Increase Research Impact Conference held at Leisure Lodge Resort, Mombasa, Kenya from 5th to 9th October 2008.*
- 22.36. Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M. and Onyango, C.A. (2008p). Bunch quality of tissue culture c.v. Giant Cavendish banana (*Musa spp.*) as influenced by inorganic fertilizers and micronutrients. *Paper presented at the Banana and Plantain in Africa: Harnessing International Partnerships to Increase Research Impact Conference held at Leisure Lodge Resort, Mombasa, Kenya from 5th to 9th October 2008.*
- 22.37. Miriti, J.K., Njoroge, C.K., Mathooko, F.M., Losenge, T., Van Lauwe B. and Jefwa J. (2008q). Postharvest characteristics of tissue culture banana ratoon crops in nutrient omission trial. (2008). *Paper presented at the Banana and Plantain in Africa: Harnessing International Partnerships to Increase Research Impact Conference held at Leisure Lodge Resort, Mombasa, Kenya from 5th to 9th October 2008.*
- 22.38. Madigu N.O., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008r). Influence of water deficit on the physiology and physico-chemical characteristics of mango (*Mangifera indica* L. cv. Tommy Atkins fruit. Part II – Postharvest behaviour. *Paper presented at the International Society for Horticultural Science Asia-Pacific Symposium on Assuring Quality and Safety of Agri-Foods, Bangkok, Thailand 4th to 6th August 2008.*
- 22.39. Madigu N.O., Mathooko, F.M., Onyango, C.A., Kahangi, E.M. and Owino, W.O. (2008s). Influence of water deficit on the physiology and physico-chemical characteristics of mango (*Mangifera indica* L. cv. Tommy Atkins fruit. Part I – Fruit growth and development. *Paper presented at the International Society for Horticultural Science Asia-Pacific Symposium on Assuring Quality and Safety of Agri-Foods, Bangkok, Thailand 4th to 6th August 2008.*
- 22.40. Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M., Onyango C.A., Van Lauwe B. and Jefwa J. (2007a). The effect of inorganic fertilizer and micronutrients on total soluble solids, sugar and sensory quality of tissue culture banana (*Musa sp.*) cv. Giant Cavendish. *Paper presented at the Third JKUAT Scientific, Technological and Industrialization Conference under the Theme: Harnessing Scientific and Technological Synergies for Innovation and Rapid Industrialization held at JKUAT, Juja from 25th to 26th October 2007.*
- 22.41. Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M. and Onyango C.A. (2007b). Determination of maturity indices of tissue culture bananas

- (*Musa* spp) cv. Williams and Grande Nain. *Paper presented at the KARI Mini Conference held at KARI HQ from 5th to 7th November 2007.*
- 22.42. Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M. and Onyango C.A., Van Lauwe, B. and Jefwa, J. (2007c). Total soluble solids, sugar and sensory quality of tissue culture bananas (*Musa* sp. Cv. Giant Cavendish) as influenced by inorganic fertilizers and micronutrients. *Paper presented at the KARI Mini Conference held at KARI HQ from 5th to 7th November 2007.*
- 22.43. Matheka, J.M. and Mathooko, F.M. (2007d). Prevalence of Protein Energy Malnutrition among Children Aged 6-59 Months at Thika District Hospital, Kenya. *Paper Presented at the Third Food Science and Nutrition Network for Africa (FOSNNA) Biennial Conference Held in Ouagadougou, Burkina Faso, From 9th to 11th April 2007.*
- 22.44. Muchui, M.N. and Mathooko, F.M. (2007e). Fruit quality and postharvest behaviour of tissue culture banana fruit as influenced by inorganic fertilizers and micronutrient applications. *Paper Presented at the Third Food Science and Nutrition Network for Africa (FOSNNA) Biennial Conference Held in Ouagadougou, Burkina Faso, From 9th to 11th April 2007.*
- 22.45. Mathooko, F.M. (2007f). Research Trends, Challenges and Opportunities in Linking the Agriculture Product Value Chain for Enhanced Food Security in Sub-Saharan Africa – The Case of Agro-Processing. *Paper Presented at the Third Food Science and Nutrition Network for Africa (FOSNNA) Biennial Conference Held in Ouagadougou, Burkina Faso from 9th to 11th April 2007.*
- 22.46. Okoth, J.K., Mathooko, F.M. and Makokha, A.O. (2007g). The Effect of Germination on the Bioavailability of Iron and Phytate Content in Some Kenyan Foods. *Paper Presented at the Third Food Science and Nutrition Network for Africa (FOSNNA) Biennial Conference Held in Ouagadougou, Burkina Faso from 9th to 11th April 2007.*
- 22.47. Attended as an Expert a Regional Stakeholders Workshop on National Agricultural Research System Policy held at Kenya Agricultural Research Institute (KARI) Headquarters, Nairobi *from 22nd to 23rd March 2007.*
- 22.48. Mathooko, F.M. (2007h). Identification of barriers in effective transmission of food processing skills among informal small and micro enterprises. *Paper presented at AICAD Researchers Workshop held at AICAD Headquarters, Juja, Kenya from 20th to 21st February 2007.*
- 22.49. Mathooko, F.M. (2006a). Food Science and Nutrition Network for Africa: Achievements, Challenges and Way Forward. *Paper at the International Foundation of Science (IFS) and Organization for the Prohibition of Chemical Weapons (OPCW) Workshop: Chemistry in Nature ~ Natural*

Resources: Chemical, Biological and Environmental Aspects held at Hilton Hotel, Nairobi, Kenya from 10th to 14th December 2006.

- 22.50. Attended Stakeholders Workshop on Agricultural Education and Training in Kenya – Re-Engineering Agricultural Education and Training for Industrialization and Development in Kenya held at the Kenya School of Monetary Studies, Nairobi, Kenya from *30th November to 1st December 2006.*
- 22.51. Attended the 10th Kenya Agricultural Research Institute (KARI) Biennial Scientific Conference and Second Kenya Agricultural Forum held at the KARI Headquarters Complex, Nairobi, Kenya from *13th to 17th November 2006.*
- 22.52. Okoth, J.K., Makokha, A.O. and Mathooko, F.M. (2006b). The effect of germination on the bioavailability of iron and phytate content in some Kenyan foods. *Paper presented at the 2006 JKUAT Scientific, Technological and Industrialization Conference under the Theme: Harnessing Scientific and Technological Synergies for Innovation and Rapid Industrialization held at JKUAT, Juja from 26th to 27th October 2006.*
- 22.53. Wanjala, G.W., Mathooko, F.M., Kutima, P.M. and Mathara, J.M. (2006c). Microbiological quality and safety of raw and pasteurized milk marketed in and around Nairobi region. *Paper presented at the 2006 JKUAT Scientific, Technological and Industrialization Conference under the Theme: Harnessing Scientific and Technological Synergies for Innovation and Rapid Industrialization held at JKUAT, Juja from 26th to 27th October 2006.*

23. INVITED PRESENTATIONS

- 23.1. Mathooko, F.M. (2008). Genetically modified organisms and food security in Africa. Paper presented at the Sub-Saharan Africa Regional Workshop on Food Education, Security and Social Perspective held in Addis Ababa, Ethiopia from 6th to 8th October 2008. **Key note Speaker.**
- 23.2. Mathooko, F.M. (2006). Agriculture in Sub-Saharan Africa – Linking Agricultural Production with Postharvest Value Addition for Sustainable Rural Development. *Invited Paper presented the Second Open Forum under the theme Agriculture in Africa II – Human Capacity Development for Sustainable Food Production held at Obihiro University of Agriculture and Veterinary Medicine, Hokkaido, Japan from 15th to 17th March 2006.*
- 23.3. Mathooko, F.M. (2004). *Japan assistance to developing countries through international cooperation – The case of Kenya. Invited lecture given on 17th November 2004 at the Faculty of Food Culture, Sakuyo University, Kurashiki, Japan.*

- 23.4. Mathooko, F.M. (2003a). *Enhancing Farmers' Competence in Linking Agricultural Production to Agro-Processing and Generation of Synergistic Benefits for Improved Livelihood - The Case of Sub-Saharan Africa. Keynote paper presented at the Regional Farmers' Competence Initiative (FCI) Launching Workshop held in Addis Ababa, Ethiopia from 14th to 17th July 2003.*
- 23.5. Mathooko, F.M. (2003b). *Linking Agricultural Production to Postharvest Processing in Sub-Saharan Africa. Paper presented on 20th November 2003 at the Okayama University Faculty of Agriculture Seminar Series.*
- 23.6. Mathooko, F.M. (1999). *Regulation of physiological and biochemical processes in harvested fruits and vegetables by carbon dioxide: Special reference to ethylene biosynthesis and respiratory metabolism. Invited paper presented to members of the Postharvest Working Group of the Japan Association of Food Preservation Scientists on 21st January 1999, Osaka, Japan.*

24. UNDERGRADUATE STUDENTS' PROJECTS SUPERVISED

I have supervised several undergraduate student projects.

25. POSTGRADUATE STUDENTS SUPERVISED

25.1. Ph.D. LEVEL

- 25.1.1. Mr. Nyaberi, M.O. (2011 – 2018). Characterization of the Phytochemical Preservatives and Nutritive Qualities of *Tamarindus indicus* and *Ziziphus abyssinica* A. Rich Herbs. Ph.D., Jomo Kenyatta University of Agriculture and Technology.
- 25.1.2. Ms. Okoth, E.M. (2011 – 2016). Assessment, Improvement and Development of Mango (*Mangifera indica*) Fruit Postharvest Handling and Value Addition Technologies in Kenya. Ph.D. student, Jomo Kenyatta University of Agriculture and Technology – Graduating in November, 2016.
- 25.1.3. Mr. Wawire, Michael M. (2008 - 2012). Modeling and Process Optimization for Removal of Antinutrients in Selected Green Leafy Vegetables Consumed in Kenya Ph.D., Jomo Kenyatta University of Agriculture and Technology.
- 25.1.4. Mrs. Muchui, M.N. (2008 – 2011). Physiological and Biochemical Characterization of Tissue Culture and Conventional Bananas during Growth and Postharvest handling. Ph.D., Jomo Kenyatta University of Agriculture and Technology.

- 25.1.5. Mr. Afolabi M. (2004 ~ 2008). Preservative Effects and Identification of Bio-active Components of the Extracts of *Aframommum danielli* Seeds, Leaves, Flowers, Stems and Roots **Ph.D., University of Ibadan, Nigeria.**
- 25.1.6. Mr. Akande, E. (2005 ~ 2008). Nutritive and Preservative Potentials of Wild Pepper (*Erythrocot anomala*) Seed Extract. **Ph.D. University of Ibadan, Nigeria.**
- 25.1.7. Ms. Mwaniki, M.W. (2005 – 2008). Functional Screening and Characterization of the Secretomes Associated with Ripening-Related Changes During Pear Fruit Development and Ripening. **Ph.D., Okayama University, Japan.**
- 25.1.8. Mr. Owino, W.O. (2001~2004). Cell wall modifications and the regulatory mechanisms of ethylene biosynthesis in fig (*Ficus carica* L.) fruit. **Ph.D., Okayama University, Japan.**
- 25.1.9. Ms. Hiwasa, K. 2000 – 2003). Studies on the Regulatory Mechanism of Softening in Pear (*Pyrus communis* L.) Fruit. **Ph.D., Okayama University, Japan.**

25.2. M.Sc. LEVEL

- 25.2.1. Mr. Runkua, J.M. (2007~2008). Influence of preharvest bagging on mango (*Mangifera indica* L) fruit quality and postharvest physiology. **M.Sc. student, Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.2. Mr. Nyaberi, M.O. (2007~2008). Characterization of dried herb powder utilized for preservation of meat by the pastoral communities of West Pokot. **M.Sc. student, Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.3. Ms. Gakuya, L.W. (2007~2008). Characterization of traditionally processed goat milk among Maasai community in Kajiado District. **M.Sc. student, Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.4. Mr. Miriti, J.K. (2007~2008). Influence of inorganic fertilizers (macro and micronutrients) on yield and quality attributes of tissue culture banana (*Musa spp*) ratoon crop. **M.Sc. student, Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.5. Ms. Madigu, N.O. (2006~2007). Physical, Biochemical and Physiological Characteristics of Mango (*Mangifera indica* L.) Fruit during Growth, Development and Postharvest Handling. **M.Sc., Jomo Kenyatta University of Agriculture and Technology.**

- 25.2.6. Mr. Wanjala, G.W. (2005/2006). Assessment of Quality and Safety of Milk Marketed Within Nairobi City and its Environs. **M.Sc., Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.7. Ms. Mwaniki, M.W. (2003-2005). Biochemical and molecular mechanisms of pear fruit softening. **M.Sc. Okayama University.**
- 25.2.8. Nagashima, K. (2003/2004). Expression of β -galactosidase genes during Japanese pear (*Pyrus pyrifolia* L.) fruit growth and on-tree ripening. **M.Sc., Nihon University, Japan.**
- 25.2.9. Ms. Okoth, J.K. (2003/2004). Bioavailability of iron and zinc in some commonly consumed foods in Kenya. **M.Sc., Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.10. Mr. Mutuku, J.M. (2003/2004). Impact of environmental lead pollution on food safety and human health in Kenya. **M.Sc., Jomo Kenyatta University of Agriculture and Technology.**
- 25.2.11. Matsuzaki, M. (2003/2004). Roles of β -galactosidase and α -arabinofuranosidase in the regulation of European pear (*Pyrus communis* L.) fruit softening. **M.Sc., Okayama University, Japan.**
- 25.2.12. Ms. Ruth Nyaga (2000 – 2001). Evaluation of pesticide residues in French beans grown in Mwea region of Kenya. **M.Sc., University of Greenwich, UK.**
- 25.2.13. Mr. Owino, W.O. (1999-2001). Molecular and biochemical aspects of the regulation of ethylene biosynthesis and perception during ripening and in response to wounding in avocado (*Persea americana* Mill cv. Bacon) fruit – **M.Sc., Okayama University, Japan.**
- 25.2.14. Mr. Nakamoto, J. (1997/98). Expression characteristics of 1-aminocyclopropane-1-carboxylate (ACC) synthase and ACC oxidase in cucumber fruit during development and postharvest storage – **M.Sc., Okayama University, Japan.**
- 25.2.15. Mr. Kimata, M. (1997/98). The role of ethylene in the regulation of 1-aminocyclopropane-1-carboxylate (ACC) synthase and ACC oxidase in ripening pear fruit – **M.Sc., Okayama University, Japan.**
- 25.2.16. Ms. Liu Xue Jun. (1998/99). Expression pattern of ACC synthase and ACC oxidase genes in banana fruit during ripening – **M.Sc., Okayama University, Japan.**

- 25.2.17. Ms. Tsunashima, Y. (1998/99). Cloning and expression characteristics of genes encoding ethylene biosynthetic enzymes in peach (*Prunus persica* L.) fruit – M.Sc., Okayama University, Japan.

25.3. EXCHANGE STUDENTS SUPERVISED

- 25.3.1. Mr. Afolabi M. (2008). Preservative Effects and Identification of Bio-active Components of the Extracts of *Aframommum danielli* Seeds, Leaves, Flowers, Stems and Roots Ph.D. Student, University of Ibadan, Nigeria.
- 25.3.2. Mr. Mongi, J.R. (2008). Development of Cocoyam Based-Products for Human Consumption. M.Sc. Student, Sokoine University of Agriculture, Tanzania.
- 25.3.3. Mr. Akande, E. (2005 ~ 2008). Nutritive and Preservative Potentials of Wild Pepper (*Erythrocot anomala*) Seed Extract. Ph.D. Student, University of Ibadan, Nigeria.
- 25.3.4. Bamwirire, D. (2007). Pro-vitamin A (β -carotene) Retention in Orange-fleshed Sweet Potato-Based Staple Dishes from Central and Eastern Uganda. M.Sc. Student, Makerere University, Uganda.
- 25.3.5. Ooko, G. (2007). Evaluation of Selected Potato Varieties for Processing into Frozen French Fries and Crisps following Storage at Ambient Conditions. M.Sc. Student, University of Nairobi.
- 25.3.6. Mr. Engdawork Admasu (2006). Levels of Selenium, Potassium, Copper and Calcium in Cow's Whole Milk Distributed in Addis Ababa, Ethiopia. M.Sc. Student. Addis Ababa University, Ethiopia.

26. THESES EXAMINED

26.1. Ph.D. THESES

- 26.1.1. Ms. Margaret Ndunge Musyoka (2019). Competitive Strategies, Alliance Networks and Firm Performance in the Telecommunication Industry in Kenya Ph.D. Thesis – Business Administration, Machakos University, Kenya.
- 26.1.2. Mrs. Elizabeth Wanjekeche (2009). Cookability and Nutritional Properties of Soaked, Stored and Roasted Mucuna (*Mucuna*

pruriens) Beans. **Ph.D. Thesis – Food Science and Technology, University of Nairobi, Kenya.**

- 26.1.3. Ms. Agnes W. Kihurani (2003). Cultural Practices, Pathological and Physical Factors Associated with Postharvest Deterioration of Sweet potato (*Ipomea batatas* L.) Roots. **Ph.D. Thesis - Plant Pathology (Postharvest Pathology), University of Nairobi, Kenya.**
- 26.1.4. Mr. Gabriel T. Nduguru (2001). Influence of Quality Attributes on the Market Value of Fresh Sweet Potato (*Ipomea batatas* L.) Tubers and Processed Cassava (*Manihot esculenta* Crantz) Roots.' **Ph.D. Thesis, Sokoine University of Agriculture, Tanzania.**
- 26.1.5. Mr. Akira Nakatsuka (2000). Characterization of the Mode of Expression of ACC Synthase and ACC Oxidase in Tomato (*Lycopersicon esculentum*) Fruit. **Ph.D. Thesis, Okayama University, Japan.**
- 26.1.6. Mr. Shinjiro Shiomi (1998). Studies on the Difference in Ripening Characteristics Between Melon and Cucumber Fruits Associated with Ethylene Biosynthesis and Related Gene Expression. **Ph.D. Thesis, Okayama University, Japan.**

26.2. M.Sc. THESES

- 26.2.1. Mr. Evans Mwenda (2022). Analysis of Smallholder Tomato Farmer Awareness and Adoption of Information and Communication Technology (ICT)-Based Pest Information Services in the Central Highlands of Kenya. **M.Sc. Thesis – Agribusiness, Machakos University, Kenya.**
- 26.2.2. Mr. Ronald Katende (2006a). Management of Postharvest Ridge Blackening of Okra (*Abelmoschus esculentus* L. Moench) Pods. **M.Sc. Thesis – Crop Science, Makerere University, Uganda.**
- 26.2.3. Ms. Phyllis Kasambula Galiwango (2006b). Enhancing Tomato (*Lycopersicon esculentum* Mill.) Fruit Shelf – Life by Cultural and Field Management Practices. **M.Sc. Thesis – Crop Science, Makerere University, Uganda.**
- 26.2.4. Ms. Julia K. Kiage-Otaya (2006c). Levels of Serum Zinc and Vitamin A among Pregnant and Breastfeeding Mothers: Possible Impact on Mother-to-Child Transmission of HIV/Aids in Kenya. **M.Sc. Thesis - Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Kenya.**
- 26.2.5. Mr. Benjamin M.N. Kagina (2006d). Predictors of Persistent Iodine Deficiency Disorder in Central Highlands of Kenya – The

Case of Nyandarua District. **M.Sc. Thesis - Epidemiology, Jomo Kenyatta University of Agriculture and Technology, Kenya.**

- 26.2.6.** Ms. Phoebe Kaddumukasa (2006e). Influence of Drying Methods on the Quality Characteristics of Cooking Banana Flour. **M.Sc. Thesis - Food Science and Technology, Makerere University, Uganda.**
- 26.2.7.** Mr. Enock Musinguzi (2004a). Characterization of the Nutritional Value of Selected Indigenous Fruits and Vegetables and Changes that Occur During Traditional Cooking and Preservation of the Vegetables – A Case Study of Rukungiri District, Uganda. **M.Sc. Thesis - Food Science and Technology, Makerere University, Uganda.**
- 26.2.8.** Ms. Christine M. Mwangi (2004b). Quality of Lake Victoria Nile Perch (*Lates niloticus*) at the Landing Facility as a Potential Microbiological and Organochlorine Pesticide Residue Hazards Critical Control Point. **M.Sc. Thesis - Food Science and Technology, University of Nairobi.**
- 26.2.9.** Mr. Justus Mike Ocom (2003a). Production of a Quick-to-Cook High-Energy High-Protein Product from a Mixture of Sweet Potato (*Ipomea batatas* L.) Roots and Soybean (*Glycine max* L.). **M.Sc. Thesis - Food Science and Technology, Makerere University, Uganda.**
- 26.2.10.** Ms. Angela Muthoni Mwaniki (2003b). Utilization of Locally Grown Plant Materials in the Production of an Intervention Food Formulation for Malnourished Children in Marginal Areas – The Case of Makindu Location, Makueni District, Kenya. **M.Sc.Thesis - Applied Human Nutrition, University of Nairobi, Kenya.**
- 26.2.11.** Ms. Dorcus Mbithe David (2002a). A Comparative Study on Food Security and Nutritional Status among Coffee and Non-Coffee Growing Households in Kathiani Division of Machakos District, Kenya. **M.Sc. Thesis - Applied Human Nutrition, University of Nairobi, Kenya.**
- 26.2.12.** Ms. Beatrice Mgaya (2002b). Effects of Traditional Dehulling and Soaking of Maize on Flour Quality: Case Study of Morogoro and Iringa Regions of Tanzania. **M.Sc. Thesis - Food Science and Technology, Sokoine University of Agriculture, Tanzania.**
- 26.2.13.** Mr. Julius T. Panga (2002c). Effect of Processing on the Nutritional Quality of *Moringa oleifera* Leaves and Pods' **M.Sc. Thesis - Food Science and Technology, Sokoine University of Agriculture, Tanzania.**

- 26.2.14. Mr. Leonard William Tungaraza Fweja (2002d). Composition, Sensory Characteristics and Aroma Profile of Off-Vine-Ripened mango (*Mangifera indica* L.) Fruit. **M.Sc. Thesis - Food Science and Technology, Sokoine University of Agriculture, Tanzania.**
- 26.2.15. Ms. Akwilina W. Mwanri (2002e). The Potential of Sweet Potato (*Ipomea batatas* L.) Leaves in the Contribution of Vitamin A, Vitamin C, Iron and Calcium in the Diets of 2-5 Year-Old Children in Tanga, Tanzania. **M.Sc. Thesis - Applied Human Nutrition, University of Nairobi, Kenya.**
- 26.2.16. Mr. Patrick K. Njoroge (2001a). Response of Snowpeas (*Pisum sativum* L. var. Macrocarpon) to Nitrogen and Phosphorus Fertilizer Applications. **M.Sc. Thesis, University of Nairobi, Kenya.**
- 26.2.17. Ms. Senait Zewdie (2001b). Nutrient Adequacy and Bacteriological Quality of Complementary Diets and their Impact on the Nutritional Status of Children (6 – 24 Months Old) in the Slum Areas of Addis Ababa, Ethiopia. **M.Sc. Thesis - Applied Human Nutrition, University of Nairobi, Kenya.**
- 26.2.18. Ms. Cecilia M. Onyango (2000b). Effects of Genotype and Storage Condition on Pod and Green Pea Yield and Nutritional Quality of Vegetable Pigeon peas (*Cajanus cajan* (L.) Millsp. **M.Sc. Thesis, University of Nairobi, Kenya.**

27. CONSULTANCY

- 27.1. Consulted in the review of promotions to Full Professor position for Bahir Dar University, Ethiopia ~ **2023 to Present.**
- 27.2. Consulted in the review of promotions to Full Professor position for Taita Taveta University, Kenya ~ **2018 to Present.**
- 27.3. Sensitization of research opportunities in Japan within the Eastern Africa Region under the auspices of the Japan Society for the Promotion of Science, **2010 – 2016.**
- 27.4. Consulted for the University of Zambia, University of Zimbabwe and Sokoine University of Agriculture, Tanzania on curriculum development.
- 27.5. Assessment of Competence Gaps in Linking Agricultural Production with Value Adding and Marketing in Kenya for Sustainable Rural Livelihood – ICRAF/RELMA Project- 2004.
- 27.6. Coordinated a UNDP-funded training programme in Food Processing, Preservation and Storage Technologies for students from the Kigali

Institute of Science, Technology and Management, Rwanda held at the Jomo Kenyatta University of Agriculture and Technology, Kenya in March 2003.

- 27.7. Commissioned by the Higher Education Accreditation Council of Tanzania to review new undergraduate programmes, namely, B.Sc. in Aquaculture and B.Sc. in Biotechnology and Laboratory sciences to be offered by the Sokoine University of Agriculture, Morogoro, Tanzania - 2002.
- 27.8. Participates in the panel for review of promotions to Associate Professor position for the Department of Food Science and Technology, Sokoine University of Agriculture, Tanzania.
- 27.9. Coordinated a World Bank-funded Technology and Business Development Service Voucher Training programme in Processing of Specific Food Products held at the Jomo Kenyatta University of Agriculture and Technology, Kenya from 1998 – 2001.
- 27.10. Assessment of Postharvest Losses of Perishable Food Products in Kenya, Tanzania, Uganda and Zimbabwe – 1999-2000. – JICA Project. I was the Team Leader.
- 27.11. Development of B.Sc. (Food Science and Technology) curriculum for the Kigali Institute of Science, Technology and Management, Rwanda – 1999/2000.
- 27.12. Monitoring and Evaluation of ex-participants of the JICA-sponsored Third Country Group Training in Applied Food Analysis in Tanzania and Uganda in 2000.
- 27.13. Monitoring and Evaluation of ex-participants of the JICA-sponsored Third Country Group Training in Applied Food Analysis in Zimbabwe in 1999.
- 27.14. Setter, moderator and examiner of Kenya National Examinations for Ordinary Diploma and Higher National Diploma in Food Technology from 1990 to Present Day. I also evaluate Research Reports for Ordinary Diploma and Dissertations for Higher National Diploma.
- 27.15. Development of B.Sc. (Food Science and Technology - Honours Programme) curriculum for the University of Zimbabwe, Zimbabwe-1999.
- 27.16. GTZ project on quality evaluation of fresh and dried mango fruits by women groups in Kitui, Embu, Mbeere and Lamu Districts under the Integration of Tree Crops into Farming System Project of the Ministry of Agriculture and Livestock Development – 1996/97.

27.17. Resource person at the Ministry of Agriculture/USAID Training Workshop for Crops Postharvest Officers entitled “Principles and Practices of Grain Storage at Farm Level in Kenya” held at Kenya Institute of Special Education (KISE) from 4th March to 12th April 1991.

28. ACADEMIC PROGRAMMES CURRICULUM DEVELOPMENT

28.1. Participated in the development of the syllabus for the M.Sc. in Agricultural Economics and Development for the Machakos University– 2019-2020.

28.2. Participated in the development of the syllabus for the M.Sc. in Agribusiness Management for the Machakos University– 2017-2018.

28.3. Participated in the development of the syllabus for the M.Sc. in Agricultural Education/Agricultural Education for the Machakos University– 2018-2019.

28.4. Coordinated and participated in the development of curriculum for various Bachelor, Master and Ph.D. degree programmes at the South Eastern University College/South Eastern Kenya University – 2009-2013.

28.5. Coordinated and participated in the development of curriculum for various Bachelor, Master and Ph.D. degree programmes at the Machakos University College/ Machakos University – 2014-2018.

28.6. Participated in the development of the syllabus for the B.Sc. in Food Science and Nutrition for the Jomo Kenyatta University of Agriculture and Technology – 2000/2001.

28.7. Participated in the revision of the syllabus for the B.Sc. in Food Science and Postharvest Technology for the Jomo Kenyatta University of Agriculture and Technology – 2000/2001.

28.8. Participated in the development of the syllabus for the B.Sc. in Food Science and Technology for the Kigali Institute of Science, Technology and Management, Rwanda – 1999/2000.

28.9. Participated in the development of the syllabus for the B.Sc. in Food Science and Technology – Honours Programme for the University of Zimbabwe, 1999/2000.

28.10. Participated in the development of the syllabus for the M.Sc. in Food Science and Technology for the Jomo Kenyatta University of Agriculture and Technology – 1998/99.

28.11. Participated in the revision of the syllabus for the B.Sc. in Food Science and Postharvest Technology for the Jomo Kenyatta University of Agriculture and Technology – 1995/96.

28.12. Participated in the development of the syllabus for the B.Sc. in Food Science and Postharvest Technology for the Jomo Kenyatta University of Agriculture and Technology – 1990.

29. TRAINING PROGRAMMES CURRICULUM DEVELOPMENT

29.1. Participated in the development of curriculum for a JICA-funded training programme entitled “Regional Group Training in Food Processing, Preservation and Storage Technologies” – 2002.

29.2. Participated in the development of curriculum for a World Bank-sponsored Technology and Business Development Services (TBDS) Voucher Training Programme entitled “Processing Technologies for Specific Food Products” – 2001.

29.3. Participated in the development of curriculum for a JICA-funded training programme entitled “Regional Group Training in Applied Food Analysis” – 1996/97.

30. SERVICE AT COMMUNITY LEVEL

30.1. **Member and Chairman, Board of Management** – Machakos Teachers College – **March, 2022 to Present Day.**

30.2. **Member and Chairman, Board of Management** – Machakos Girls High School – **March, 2022 to Present Day.**

30.3. **Chairman** – Mutakalo Welfare Group.

30.4. **Member and Vice Chairman, Board of Management** – Machakos Girls High School – **May, 2019 to March, 2022.**

30.5. **Member, Board of Management** – Machakos Teachers College – **2007 to March, 2022.**

30.6. **Vice Chairman, PTA Executive Committee** - Bishop Gatimu Ngandu Girls High School - **2007 to 2008.**

30.7. **Member, PTA Executive Committee** - Bishop Gatimu Ngandu Girls High School - **2005 to 2008.**

30.8. **Member, Board of Management** ~ Bishop Gatimu Ngandu Girls High School. School - **2005 to 2008.**

30.9. **Assistant Secretary** – Kenya Ex-Japan Students Association (KEJASA) – **1999 to 2009.**

30.10. **Assistant Secretary** – Shalom Estate Welfare Association - **1999 to 2005.**

- 30.11. **Assistant Secretary** - Wikwatyo Welfare Association.2001 to 2004.
- 30.12. **Secretary** – Network for Sustainable Rural Capacity Development ~ Africa (NESRCAD) –Africa (**Defunct**).
- 30.13. Give free professional advice to various Groups in Machakos County on issues among the education and agriculture.

31. **MEMBERSHIP TO PROFESSIONAL BODIES**

- 31.1. Member of the Kenya National Academy of Sciences – 2021 to Present day.
- 31.2. Member of the Food Science and Nutrition Network for Africa – 2000 to Present day.
- 31.3. Member of the Japan Society for the Promotion of Science – 1997 to 2018.
- 31.4. Member – International Society for Horticultural Sciences: 1994 – 2020.
- 31.5. Member of the American Society for Horticultural Science – 1992 to 1996.
- 31.6. Member of the Kenya Institute of Food Science and Technology – 1986 to 2019.
- 31.7. Member of the Japanese Society for Horticultural Science – 1992 to 1999.

32. **REFEREES**

- 32.1. Prof. Raphael M. Munavu
Emeritus Professor
Department of Chemistry
University of Nairobi
P.O. Box 30197-00100
NAIROBI.
Tel. 0722 – 820788/0733 – 621878;
E-mail: Rmmunavu@wananchi.com
- 32.2. Prof. Daniel Mugendi Njiru
The Vice-Chancellor
University of Embu
P. O. Box 6 – 60100
EMBU

Tel.: 0733 – 601635;
E-mail: dmugendi@yahoo.com

- 32.3.** Prof. Christine A. Onyango
Deputy Vice-Chancellor (Academic, Research and Outreach)
Taita Taveta University
P.O. Box 635-80300

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