

CURRICULUM VITAE

I. Personal Information

Name: Christine Akoth Onyango
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 Nairobi, Kenya
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Nationality: Kenyan
Year of Birth: 8th November, 1961
Profession: Food Scientist
Specialisation: Food Science and Technology
Current Position: Associate Professor

II. Key Qualifications

I am an Associate Professor with over 20 years' experience in education, research and innovation in the Department of Food Science and Technology at Jomo Kenyatta University of Agriculture and Technology where I teach undergraduate and postgraduate degree students various subjects in Food Science and Technology.

I hold a Ph.D. in Food Science and Postharvest Technology from Jomo Kenyatta University of Agriculture and Technology; Postgraduate Diploma in Integrated Agricultural Research for Development with special focus on **Capacity Building and Strengthening Rural populations** in Innovation and development, from International Centre for development-oriented Research in Agriculture (ICRA), Wageningen, The Netherlands; Postgraduate Diploma in Advanced Food Technology and Management from Hebrew University of Jerusalem, Israel; a Master's degree in Food Science and Technology and a Bachelor's degree in Food Technology and Nutrition from the University of Nairobi.

I am currently the Chairman, Department of Food Science and Technology. My key roles include implementation of management decisions, facilitation of teaching research and outreach, chair meetings and convene committees appropriately for the smooth running of the department. In addition I am the Chief Examiner and prepare all departmental results to the Dean of the Faculty as well as attending all Senate meetings as described in the statutes. I also prepare the departmental performance contract and assist all members to prepare individual performance contracts as well as coordinating staff appraisal. I also lead in identification of new programme areas and review of existing programmes. Before my appointment as Chairman, I served as Examinations Coordinator for 5 years.

December, 2011

C. A. Onyango

This required me to prepare the examination timetable for the department, assign invigilators and rooms appropriately. I also corresponded with Chairmen of servicing departments as well as with the External examiners and served as the Examiners Board secretary. I was the custodian of all examination marks and facilitated their smooth hand over to the Dean and the Vice Chancellor. I have also served as a Patron of the Society of Food Technology Students (SOFTS), JKUAT facilitating and initiating meetings and seminars of FST students and serving as a bridge to link them with the food industry players. I also was MSc Projects Coordinator. I have and still effectively serve the Department in various Senate committees.

I supervise both undergraduate and graduate students' research projects. My research focus is on nutrition, utilisation, safety and preservation of food products as well as community empowerment through innovative engagement.

I have attended and presented papers in several conferences and workshops, both locally and internationally. I have published widely in refereed journals and conference proceedings and continue to develop relevant research in food processing, preservation and nutrition. I also review articles for Journals of Agriculture Science and Technology and Tropical Microbiology and serve as a reviewer for AICAD R&D research proposals. I have served as a Visiting Lecturer in Food Science at the University of Namibia and an external Examiner for Kigali Institute of Science Management and Technology and the University of Nairobi.

I have wide experience in consultancy as a development expert and trainer. As a trainer, I have worked with Federation of Kenya Employers in the preparation of employees of various organisations for early retirement. I have also been involved in training personnel in small-scale enterprise development in the area of Food Handling, Processing and Preservation. At the national level, I have extensive consultancy experience in conducting **project evaluations** involving community capacity building, food, nutrition and hygiene issues as well as in socio-demographic and health research (*both qualitative and quantitative*) in the areas of nutrition, food security, reproductive health and the youth, child mortality and *HIV/AIDS*. Through these activities we successfully negotiated the renewal of a development project to the South Nyanza Community through IFAD.

I am an excellent team worker, with wide exposure to diverse people locally and internationally and communicate very well with individuals and groups. I have excellent analytical and reporting skills, both verbal and written and am above average in computer literacy, especially with regard to word processing and data analysis using Excel. I am an accomplished trainer and expert in *participatory planning methodologies*, as well as human rights based approaches (RBA) to development programming that includes the rights of the child, youth and women. I am also a mentor to young women scientists. In this capacity I have played a Key role as the Kenya Country Coordinator for the ARD Initiative in the region and facilitated training of faculty members on developing e-content for distance learning in collaboration with Commonwealth of Learning.

III. Professional Activities

1. Member – Kenya National Food Fortification Alliance – 2006
2. Member - Kenya Institute of Food Scientists and Technologists (KIFST), 2011
3. Member - Japanese Animal Science Society, 2000
4. Member - Institute of Food Technologists (IFT) 2000

IV. Experience Record

1. Date: 1989 – to date
 Organisation: Jomo Kenyatta University of Agriculture and Technology
 Position: Associate Professor (July 2010 – to date)
 Senior Lecturer (October 2002 – July 2010)
 Lecturer (1992 – 2002)
 Assistant Lecturer (1989 – 1992)
 Description: Institution of higher learning (public)

Duties and Appointments

- Appointed Chairman, Department of Food Science and Technology w.e.f 13 August 2009 for a period of 2 years, renewed for another two year term w.e.f. August 2011.
- External Examiner, Department of Food Technology and Nutrition, University of Nairobi, 2007 – 2009
- Coordinator of Core Team and Trainer – IAR4D Initiative in Kenya: July 2006 – to date
- Convenor: Development of new Master's programmes and review of current masters programmes in the department: 2004 – to date.
- Examinations Officer, Department of Food Science and Technology: Effective July 2004 – August 2009.
- Warden Hall 1, JKUAT: Effective 16 March 2004 – 2008.
- Assistant Co-ordinator, Research and Development, AICAD, 2 January 2002 to 30 June 2003.
- Member, Technical Committee for Edible Fats and Oils and Food Safety and Hygiene, Kenya Bureau of Standards: 2004 – 2006.
- Member, Dean's Ad Hoc sub-committee for review of the University Statutes: 2003.
- Member Departmental Sub-committee on *Jua Kali*
- Acting COD: 23rd January – 7th February, 14 – 20th July and 28th July – 3rd August 2001.
- Member of Vice Chancellor's Committee to review and harmonise house allowances for JKUAT Staff, 31st October 2001.
- Food Science Workshops Manager: 2000
- Member Consultancy Team of TAIYO Enterprises on Survey of Five National Universities in Kenya: January – April 2000.
- Faculty of Agriculture Senate Representative: 2000 – 2003.
- Member, Faculty of Agriculture Welfare Committee

- All these in addition to teaching and supervision of research projects to undergraduate and postgraduate students

Achievement as Chairperson, FST

Leadership and people management

- ❖ As Chairperson, facilitated internal advertisement of departmental positions
 - Led the short listing of candidates
 - Facilitated promotion of staff who had taken several years to be promoted
 - Coordinated successful, open and participatory staff evaluation
 - Developed departmental performance indicators and successfully achieved above average performance from the staff in the 2010/2011 academic year
 - Involved senior technical and academic staff in key decision making processes
 - Motivated staff of all cadres to seek to break new frontiers in the career pursuits

- ❖ Successfully completed review of and implemented two undergraduate programmes:
 - BSc Food Science and Postharvest Technology
 - BSc Food Science and Nutrition

- ❖ Successfully participated in the development and implementation of the following programmes:
 - BSc Animal Health Production and Processing
 - BSc Human Nutrition and Dietetics

- ❖ Successfully initiated, developed and defended a new programme which is being implemented from January 2012
 - BSc Food Service and Hospitality Management

Academic excellence and competence

- ❖ Trained:
 - 26 participants in valued addition of selected food commodities from the Ministry of Agriculture (July 2010)
 - 5 participants from SADC region (Botswana and Lesotho) in food analysis
 - 3 participants in postharvest technology from HCDA – April 2011

- ❖ Commencing:
 - Review of existing postgraduate programmes and development of new and innovative postgraduate programmes in the Department of food science and Technology

- ❖ Published:
 - Three new publications have been achieved
 - Six manuscripts currently submitted for publication

- ❖ Supervision
 - 3 PhD students – assisted them develop acceptable and viable proposals and registration into the programme as well as attracting funds from the National Council for Science and Technology (NCST) for their work.
 - 1 MSc Student currently finishing her data collection

Coordination of key research consultancies and projects

- ❖ Successfully developed and participated in:
 - KAPAP proposal in collaboration with KARI Kitale on surveillance of aflatoxins in maize, animal feeds and milk in the North Rift (Commencing April 2011)
 - UNiBRAIN Agribusiness Innovation Incubator Consortia (AIIC): As the Project Coordinator, successfully led team that developed a winning business proposal for implementation of the Sorghum Value Chain Development Consortium, an Agri-business Incubator in which for Institutions are partnering and worth USD 2million from DANIDA. This project is currently under implementation and will run for approximately four (4) years.
 - DFID Delphe Round 5 finding of GBP 33,000 to implement PhD programme in Food Science and Nutrition, a regional programme under RUFORUM.

Partnerships, linkages and networks

- ❖ Developed:
 - MoU for online training of post graduate students with the Swedish University of Agricultural Sciences (SLU) to implement a joint MSc program in “Food on-line innovation and market”.
 - Facilitated staff to undertake collaboration with in Belgium that has won the department KES 30,000,000. This fund will be disbursed for exclusive use in the Department to upgrade teaching, research and consultancy capacity.
 - Through EDULINK (ACP/EU): Strengthening Universities’ capacity for promoting, facilitating and teaching rural innovation process (SUCAPRI) project, strong inter-institutional linkages at regional and international level with key partners including donors and collaborators
 - Through UniBRAIN Projects, the visibility of JKUAT as a regional hub for agribusiness development is recognized.
 - Food industry players locally and abroad that are willing to accept JKUAT FST students for attachment

National research/consultancy projects

- ❖ Selected national consultancies undertaken:
 - Team Leader: Mid-term Review and Design: South Nyanza Community Development project, the outputs of this review facilitated continued funding of this development project by IFAD through Ministry of planning and Development
 - Team Member: JKUAT Consultancy team that has just submitted a bid for development of curricula to upgrade and continuously train stakeholders in the tea industry to the Tea Board of Kenya. The proposal has gone through the first stage of vetting.

2. Date: 1986-1989
Organisation: Kenya Industrial Research and Development Institute (KIRDI)
Position: Research Officer II

Description: Government Research organisation

Duties

- ❖ Research Assistant in the Cereals Technology Section working on a project concerned with development and utilisation of sorghum products and their promotion. During this time I took leave to complete my Masters studies.
- ❖ Development of standards on fresh fruits and vegetables for the Technical Committee on Fresh Produce of the Kenya Bureau of Standards.

3. Date: 1985-1986
 Organisation: Ministry of Agriculture
 Position: Assistant Agricultural Officer II, Crops Division
 Description: Public Service

Duties

- ❖ Assisting the Senior Agricultural Extension Officers in their day-to-day duties.

4. Date: 1984
 Organisation: Brooke Bond Limited, Kericho Tea Factory
 Position: Factory Assistant
 Description: Tea Processing Plant

Duties

- ❖ Assisting the Factory Assistant in supervision of the daily production of brown teas.

V. Education and Professional Status

	INSTITUTION	DATE	DEGREE/DIPLOMA AWARDED
1.	Jomo Kenyatta University of Agriculture and Technology	2000	Ph.D. (Food Science and Postharvest Technology)
2.	International Centre for Research in Development Oriented Agriculture (ICRA), Wageningen, NL	2006	Diploma in Agricultural Research for Development (Distinction)
3.	University of Nairobi	1990	M.Sc. (Food Science and Technology)
4.	University of Nairobi	1985	B.Sc. Food Technology and Nutrition (Upper 2 nd Class Honours)
5.	Okayama University, Japan	1992	Certificate in Meat Science and Technology
6.	Okayama University, Japan	1997	Certificate in Meat Science and Technology
7.	Hebrew University of Jerusalem, Israel	2001	Certificate in Advanced Food Technology
8.	Limuru Girls' High School	1980	Kenya Advanced Certificate of Education (3P 1S)
9.	Limuru Girls' High School	1978	East African Certificate of Education (17 Points)

VI. Other Training

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|----|---------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1. | Tom Mboya Labour
College, Kisumu, Kenya | 1 – 5 February,
2009 | Effective Negotiations and Organizing Skills. |
| 2. | Center for Gender and
Diversity, CGIAR, Nairobi
Kenya. | 2005 – 2007 | Round 1 G&D Rockefeller Fellowship
Programme to Enhance Careers of Women
Scientists in East Africa |
| 3. | International Livestock
Research Institute (ILRI),
Addis Ababa, Ethiopia. | 16 – 22 Oct.,
2005 | Women's Leadership and Management
Course; a CGIAR Gender and Diversity
Program to enhance East African Women
Scientists. |
| 4. | ICRA, The Netherlands | September
2009 | Certificate in Design and Management of
Integrated Agricultural Research for
Development (IAR4D) Learning Programmes |
| 5. | Center for Corporate
Governance, Nairobi | April 2007 | Certificate Corporate Governance
(Distinction) |
| 6. | Commonwealth of
Learning | August 2009 | e-learning techniques and development of
modules using various IT software e.g.
KEWLForge, Moodle and Wiki |

VII. Publications

o Technical Reports

Onyango, C. A. et al. 2006. Water For The Thirsty: A Case Study of Katulani Location Water Situation, Kitui District, Kenya. International Center for Development Oriented Research in Agriculture (ICRA) Working Document Series 128 Kenya.

Onyango, C. A. and Ochieng' J. K. 2006. Community based Improved utilisation of Pearl Millet and Sorghum Varieties Grown in Arid and Semi Arid parts of Eastern Province of Kenya. Report submitted to African Institute for Capacity Development (AICAD) under Food Security Theme of R&D Division.

o Conference Proceedings

Onyango, C. A., Mathooko, F. M., Njoroge, S. M. and Kenji, G. M. 2000. Editors: Proceedings of the 2nd Regional KIFST Conference on Food Science and Postharvest Technology for Regional Development: Challenges in the new millennium. 6 – 7 March, 2000. ISBN 9966 923 02 0

Kutima, P. M., **Onyango, C. A.**, Kiiyukia, M. C. and Koaze, H. 1993. (Editors) Proceedings of Inaugural Seminar on Applied Food Analysis. 22nd February to 3rd March 1993, Nairobi, Kenya.

Kutima, P. M., L. E. Wongo. M. C. Kiiyukia, **C. A. Onyango**, and H. Koaze. 1994. (Editors) Proceedings and Final Report of 2nd Regional Group training Programme on Applied Food Analysis. 7th February to 8th March, Juja, Kenya.

L. E. Wongo, P. M. Kutima, H. Koaze, M. C. Kiiyukia and **C. A. Onyango**. 1995 (Editors) Proceedings and Final Report on 3rd Group Training Programme on Applied Food Analysis. 22nd February to 3rd March 1993, Nairobi, Kenya.

- **Refereed Articles**

Ochanda, S. O., **Onyango, C. A.**, Mwanjala, A. M., Ochieng, J. K., and Mathooko, F. M. 2010. Effects of malting and fermentation on group B-vitamins of Red sorghum, White sorghum and Pearl millets. *J. Appl. Biosci.* 34: 2128 - 2134

Ochanda, S. O., **C. A. Onyango**, M. A. Mwasaru, Ochieng, J. K., and Mathooko, F.M 2010. Effects of alkali treatment on tannins and phytates in red sorghum, white sorghum and pearl millet. *J. Appl. Biosci.* In Press.

Ochanda, S. O., **C. A. Onyango**, M. A. Mwasaru, Ochieng, J. K., and Mathooko, F.M. 2010. Effects of malting and fermentation on anti-nutrient reduction, protein digestibility, organoleptic properties and shelf-life of red sorghum, white sorghum and pearl millet. *J. Appl. Biosci.* Submitted

Owaga, E. E., **Onyango, C. A.**, Njoroge, C. K. 2010. Influence of selected washing treatments and drying temperatures on proximate composition of *Dagaa* (*Rastrineobola argentea*), a small pelagic fish specie. *African Journal of Food Agriculture, Nutrition and Development.* 10(7) : 2834 - 2848

Nyaberi, M. O., **Onyango, C. A.**, Mathooko, F. M.; Maina, J. M., Makobe M. Mwaura F. 2010. Bioactive fractions in the stem charcoal of *Ozoroa insignis* used by the pastoral communities in West Pokot to preserve milk. *J. Appl. Biosci.* 26: 1653 – 1658.

Nyaberi, M. O.; **Onyango, C. A.**; Mathooko, F. M.; Maina, J. M., Makobe M. Mwaura F. 2010. Evaluation of phytochemical, antioxidant and antibacterial activity of edible fruit extracts of *Ziziphus abyssinica* A. Rich. *J. Anim. & Plant Sci.* 6(2) : 623 – 629.

Muchui M.N., Mathooko, F.M., Njoroge C.K., Kahangi E.M., **Onyango C.A.**, S.B., Van Lauwe B. and Jefwa J. 2008. Total Soluble Solids, Sugar and Sensory Quality of Tissue culture bananas as influenced by inorganic fertilizers and micronutrients. *E. Afr. Agric. For. J.* 74(1) : 33 - 37

Owaga, E. E., **Onyango, C. A.**, Njoroge, C. K. 2009. Assessment of insect contamination, acid insoluble ash content and colour characteristics of traditionally sun-dried and oven-dried *dagaa* (*Rastrineobola argentea*). *J. Appl. Biosci.* 24: 1497 – 1507.

Muoki, P. N., Makokha, A. O., **Onyango, C. A.**, Ojijo, N. K. O. and Maziya-Dixon, B. 2009. Potential contribution of mangoes to reduction of vitamin A deficiency in Kenya. *J. Ecol. of Foods and Nutr.* 48 (6): 482 – 498.

Owaga, E. E., **Onyango, C. A.**, Njoroge, C. K. 2009. Investigation of mycoflora on *dagaa* (*Rastrineobola argentea*) as affected by washing and drying methods. *J. Appl. Biosci.* 19 : 1074 – 1081.

Owaga, E. E., **Onyango, C. A.**, Njoroge, C. K. 2008. Effect of selected washing treatments and drying temperatures on bacterial quality and safety of *dagaa* (*Rastrineobola argentea*). *Tropical Microbiol.* 4(1) : 16 – 23.

Owaga, E. E., **Onyango, C. A.**, Njoroge, C. K. 2009. Effect of selected washing treatments and drying temperatures on biochemical and microbiological quality of *dagaa* (*Rastrineobola argentea*). *African Journal of Food Agriculture, Nutrition and Development.* 9(3) : 830 - 845

Madigu, N.O., Mathooko, F.M., **Onyango, C.A.**, Kahangi, E.M. and Owino, W.O. 2009. Postharvest Behaviour and Quality Characteristics of Mango (*Mangifera indica* L.) Fruit Grown Under Water Deficit Conditions. *Proc. Asia-Pacific Symp. on Assuring Quality and Safety of Agri-Foods* Eds.: S. Kanlayanarat et al. *Acta Hort.* 837, ISHS 2009. pp 299 – 304.

Madigu, N.O., Mathooko, F.M., **Onyango, C.A.**, Kahangi, E.M. and Owino, W.O. 2009. Physiology and Quality Characteristics of Mango (*Mangifera indica* L.) Fruit Grown Under Water Deficit Conditions. *Proc. Asia-Pacific Symp. on Assuring Quality and Safety of Agri-Foods* Eds.: S. Kanlayanarat et al. *Acta Hort.* 837, ISHS 2009 pp 305 – 312.

E. W. Kamau, G. M. Kenji, M. A. Mwasaru and **C. A. Onyango**. 2007. Effect of types of foods and cooking methods on the iodine retention. Journal of Agric. Sci & Technology. Submitted.

E. W. Kamau, G. M. Kenji, M. A. Mwasaru and **C. A. Onyango**. 2007. Effect of storage conditions on the stability of iodine in iodised salt in Kenya. Journal of Agric. Sci & Technology. Submitted.

Mathooko, F. M., Wakhungu, J. W. and **Onyango, C. A.** 2005. Competence gaps in linking agricultural production with value adding and marketing in Kenya. Cataloguing-in-Publication Data, ACTS Press Nairobi. ISBN 9966-41-135-6

C. A. Onyango, M. Izumimoto and P. M. Kutima. 2008. Effect of papaya pulp treatment on the quality attributes of selected game meats and beef. J. Agric. Sci. & Technol. Submitted

C. A. Onyango, M. Izumimoto and P. M. Kutima. 1998. Comparison of some physical and chemical properties of selected game meats. Meat Sci. 49 : 117 – 126.

Mwasaru, M. A., Mathooko, F. M., **Onyango, C. A.**, Kiiyukia, C., Njoroge, S. M., Kenji, G. M., Koaze, H. and Ueda, Y. 1998. Product utilization of food commodities in Kenya. Food Pres. Sci. 24 : 255 – 266.

Izumimoto, M., **Onyango, C.A.**, P. Darmadji, K. Kataoka. 1997. Comparison of distillation and extraction methods in TBARS determination of cured meat. Scientific Reports of the Faculty of Agriculture, Okayama University. Vol. 86: 55-59.

Onyango, C.A., Keya, E.L., and Imungi, J.K. 1993. Aspects of Cassava-cereal composite flour quality and appropriate use in some Kenyan food products discovery and innovation. Discovery and Innovations 5 (3) 241-243.

Imungi, J.K., and **C.A. Onyango**, 1989. Incorporation of cassava flour into some common Kenyan Traditional foods. Ecology of Foods and Nutrition, 23: 125-129.

o **Conference Papers**

Onyango C. A., Gakuya L. W., Mathooko F. M., Maina J. M., Makobe M. and Mwaura F. 2009. 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. Proceedings of the International Conference on Regional and Interregional Cooperation to Strengthen Basic Sciences in Developing Countries. September 1-4, 2009, Addis Ababa, Ethiopia (In Press)

Onyango C. A., Gakuya L. W., Mathooko F. M., Maina J. M., Makobe M. and Mwaura F. 2009. Antimicrobial, antioxidant activity and toxicity of selected herbal plants commonly used in milk processing and preservation by the Maasai community of Kajiado District. Proceedings of the International Conference on Regional and Interregional Cooperation to Strengthen Basic Sciences in Developing Countries. September 1-4, 2009, Addis Ababa, Ethiopia (In Press)

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. 2009. Effect of bunch covers on postharvest quality of tissue cultured bananas (*Musa spp.*) cv. Williams. Proceedings of 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; 8th to 11th December 2008. (In Press)

Runkua, J.M., Mathooko, F.M., **Onyango, C.A.**, Kahangi, E.M. and Owino, W.O. 2009. On-tree fruit bagging controls lenticel discolouration and improves mango (*Mangifera indica* L. cv. Apple) fruit quality. Proceedings of 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; 8th to 11th December 2008. (In Press)

Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M., **Onyango C.A.**, Van Lauwe, B. and Jefwa J. 2008. 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 KARI Mini Conference KARI HQ

Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M., **Onyango, C.A.** and Kimani E.M. 2009. Effect of harvest maturity stage on grade and keeping quality of tissue culture banana (*Musa spp.*) cv. Williams. Proceedings of 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.

Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M. and **Onyango, C.A.** 2008. Determination of maturity indices of tissue culture banana (*Musa spp.*) c.v. Williams and Grand Naine. Proceedings of 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

Muchui, M.N., Mathooko, F.M., Njoroge, C.K., Kahangi, E.M. and **Onyango, C.A.** 2008. Bunch quality of tissue culture c.v. Giant Cavendish banana (*Musa spp.*) as influenced by inorganic fertilizers and micronutrients. Proceedings of 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

Madigu, N.O., Mathooko, F.M., **Onyango, C.A.**, Kahangi, E.M. and Owino, W.O. 2008. Influence of water deficit on the physiology and physico-chemical characteristics of mango (*Mangifera indica* L.) fruit during growth and development. Proceedings of 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.

Madigu, N.O., Mathooko, F.M., **Onyango, C.A.**, Kahangi, E.M. and Owino, W.O. 2008. Comparison of the postharvest physiology and biochemistry of mango (*Mangifera indica* L.) fruit under irrigated and non-irrigated conditions. Proceedings of 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.

Gakuya, M.W., **Onyango, C.A.**, Mathooko, F.M. and Maina, J.M. 2008. Phytochemical constituents of herbal plants commonly used in food processing and preservation by the Maasai community in Kajiado district. Proceedings of 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.

Nyaberi, M. O.; **Onyango, C. A.**; Mathooko, F. M.; Maina, J. M., Makobe M. Mwaura F. 2008. Evaluation of antibacterial activity, phytochemical and antioxidants of edible fruit extracts of *Tamarindus indica* for meat preservation. Paper presented at 3RD JKUAT Annual Scientific Conference, JKUAT Main Campus, Juja.

Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M., **Onyango C.A.**, Van Lauwe, B. and Jefwa J. 2007. The effect of inorganic fertilizer and micronutrients on total soluble solids, sugar and sensory quality of tissue culture banana (*Musa sp.*) cv. Giant Cavendish.

Muchui M.N., Mathooko F.M., Njoroge C.K., Kahangi E.M., **Onyango C.A.**, Van Lauwe, B. and Jefwa J. 2007. The effect of chemical fertilizer on postharvest quality of tissue culture bananas...3rd African Food Science and Nutrition Conference, 9 – 11 April 2007, University of Ouagadougou, Burkina Faso.

Onyango, C. A., Onyango, G. A. and Mathara, J. M. 2007. Evaluation of whey's from selected milk products as potential surface treatments for reducing microbial loads and improving quality of meat and meat products. Proceedings of the 3rd African Food Science and Nutrition Conference, 9 – 11 April 2007, University of Ouagadougou, Burkina Faso.

Onyango, C. A. 2005. Factors Affecting farmers competence in linking agricultural production with value addition and marketing. Proceedings of the Regional Symposium for Postharvest Research Forum in Eastern, Central and Southern Africa, Ridar Hotel, Mukono, Uganda, 23 – 25 February, 2005.

Onyango, C. A. 2004. Current research in Meat Science. Paper presented at Meat and Meat Stakeholders Workshop organised by Kenya Bureau Standards; Silver Springs Hotel, Nairobi, 25 November, 2004.

Onyango, C. A. 2002. The Use of mesophilic lactic acid bacteria and its effects on meat preservation and quality. Paper presented at the 4th International Course in Food Technology, Division of External Studies, Faculty of Agricultural Food and Environmental Quality Sciences, Hebrew University of Jerusalem at Rehovot, Israel.

Onyango, C. A. 2001. Quality and safety issues during post harvest handling of fish in Kenya. A paper presented at the regional Berlin Alumni Network (BAN) workshop on enhancing the dialogue in food resource management across sectors of agriculture, veterinary medicine and food science with the theme: "To establish a regional knowledge base for quality assurance of fish as food and commodity". 24 – 26 September, 2001. Kenya Trypanosomiasis Research Institute (KETRI)

Lephole, M. and **Onyango, C. A.** 2001. Analysis of nutrients of selected wild vegetables commonly consumed in Lesotho. In: Mathooko, F. M., Mwasaru, M. A. and Njoroge, S. M. (Eds.). Proceedings of the Ninth Regional Group Training Programme on "Applied Food Analysis". 22nd January to 7th March 2001, Jomo Kenyatta University of Agriculture and Technology.

Khamis, H. and **Onyango, C. A.** 2001. Effects of processing on the cyanide content of cassava. In: Mathooko, F. M., Mwasaru, M. A. and Njoroge, S. M. (Eds.). Proceedings of the Ninth Regional Group Training Programme on "Applied Food Analysis". 22nd January to 7th March 2001, Jomo Kenyatta University of Agriculture and Technology.

Okumu, C. R., **Onyango, C. A.** and Kenji, G. M. 2000. Quality assessment of honey from different parts of Uganda. In Onyango, C. A., Mathooko, F. M., Njoroge, S. M. and Kenji, G. M. Editors: Proceedings of the 2nd Regional KIFST Conference on Food Science and Postharvest Technology for Regional Development: Challenges in the new millennium. Pan-Afric Hotel, Nairobi. 6 – 7 March, 2000. ISBN 9966 923 02 0

C. A. Onyango, P. M. Kutima and M. Izumimoto. 1998. Changes in colour quality of game meats stored in modified atmospheres. Proceedings of 3rd Karlsruhe Nutrition Symposium on European research towards better and safer food. Karlsruhe, Germany. 18 – 20 October, 1998.

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Onyango, C. A. 1990. Food Science and Technology curriculum at B.Sc. and Diploma levels at Jomo Kenyatta University College of Agriculture and Technology. Paper presented at Food Science Subject Matter workshop, 27th-31st August.

○ Posters

Onyango C. A., Gakuya L. W., Mathooko F. M., Maina J. M., Makobe M. and Mwaura F. 2009. 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. International Conference on Regional and Inter-regional Co-operation to Strengthen Basic Sciences in Developing Countries. September 1-4, 2009, Addis Ababa, Ethiopia

Onyango C. A., Gakuya L. W., Mathooko F. M., Maina J. M., Makobe M. and Mwaura F. 2009. Antimicrobial, antioxidant activity and toxicity of selected herbal plants commonly used in milk processing and preservation by the Maasai community of Kajiado District. International Conference on Regional and Interregional Cooperation to Strengthen Basic Sciences in Developing Countries. September 1-4, 2009, Addis Ababa, Ethiopia

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C. A. Onyango

Onyango, C. A. et al. 2006. Water For The Thirsty: A Case Study of Katulani Location Water Situation, Kitui District, Kenya. Poster presented at Innovation Africa Symposium, Speke Resort Hotel, Munyonyo, Kampala, Uganda.

○ **Theses**

Onyango, C. A. 2000. Characterisation of meats from non-conventional animal sources in Kenya. Ph.D. Thesis.

Onyango C.A., 1990. Physico-chemical, sensory and keeping quality of cassava flour produced by simple drying techniques. M.Sc. Thesis.

VIII. Postgraduate Supervision

1. Development of a preservative from *Tamrindus indicas* and *Ziziphus abyssinica* A. Rich herbs and Determination of the phytochemical and Nutritive constituents for the preservation and Value addition of meat and fish (PhD; JKUAT, ongoing). Funded by NCST
2. Study on nutritional potential of Bamboo shoots in combating food insecurity in East African region; A Case of Kenya (PhD; JKUAT, ongoing)
3. Preservation Potential of Herbal Plants Commonly Used By the Maasai Community in Kajiado District (MSc; JKUAT, 2009)
4. Studies On The Use Of Herbs To Preserve Meat And Milk Among The Pastoral Communities Of West Pokot (MSc; JKUAT – 2009)
5. Technological Approaches for Enhancing Utilization of Sorghum and Millets in Kenya (MSc; JKUAT – 2009)
6. Growth, physiology and quality on harvest of on-tree bagged mango (*Mangifera indica* L. cv *Apple*) Fruit (MSc; JKUAT, 2009)
7. Effects of storage and cooking practices on the stability of iodine in iodised salt in Kenya (MSc; JKUAT, 2008)
8. Effects of variety, ripeness, and growing location on total carotenoid and β - carotene contents of selected Mango (*Mangifera indica* L) fruit varieties grown in Kenya. (MSc; JKUAT – 2007)
9. Maturity indices and postharvest physiology of mango (*Mangifera indica* L.) fruit (MSc; JKUAT – 2007)
10. Evaluation of Safety and Critical Control Points of Sun-Dried Dagaa (*R. argentea*) Process (MSc; JKUAT, 2005)
11. An Assessment of Hygienic and Sanitary Practices of Vendors of Street Foods in Kayole and Dandora Estates of Nairobi Kenya (MSc; Kenyatta University, 2004)
12. Studies On The Effects Of Improved Processing Techniques On The Quality And Storage Stability Of Tilapia (*O. nilotica*) From L. Victoria In Kenya (JKUAT) – 2004
13. Utilization of β -Carotene Rich Sweet Potatoes, Finger Millet and Pigeon Peas in Development of Alternative Bread (MSc; Kenyatta University, 2004)

IX. Projects Currently Undertaken

1. 2008: KAPP FP2006046: Identification and prioritization of maize technologies in terms of yield and nutritional content through research and development (Collaborator - ongoing)
2. 2008: EDULINK (ACP/EU): Strengthening Universities' capacity for promoting, facilitating and teaching rural innovation process (SUCAPRI)(Inter-institutional Collaboration, Kenya Country Coordinator - ongoing)

3. 2007: JKUAT: Screening and use of SSR markers to evaluate sorghum soma-clonal variants and mutants for salinity and drought resistance (Collaborator - ongoing)
4. 2005: AICAD: Utilisation of Sorghums and millets by communities living in ASAL regions of Eastern Province, Kenya. (Principal Investigator - completed)
5. 2005: JKUAT: Evaluation and documentation of indigenous plants used in processing and preservation of livestock products among pastoral communities in Kenya. (Principal Investigator - completed)
6. 2005: JKUAT: Postharvest technologies, innovations and practices for value adding and product diversification that enhance safety, quality and minimise losses during production, harvesting and storage of important products. (Collaborator - ongoing)
7. 2005: JKUAT: Application of 1-methylcyclopropene as a tool for extending the postharvest storage life and quality of horticultural commodities using mango and tissue culture bananas as model fruits. (Collaborator - ongoing)

X. Workshops, Courses, Seminars, Conferences and Meetings

- i. 7 – 25 September, 2009: Professional Capacity Building Programme to Design and Manage Integrated Agricultural Research for Development (IAR4D) Learning Programmes, ICRA, Wageningen, The Netherlands.
- ii. 1 – 4 September, 2009: International Conference on Regional and Interregional Cooperation to Strengthen Basic Sciences in Developing Countries. United Nations Centre, Addis Ababa, Ethiopia
- iii. 1 – 5 February, 2009: Effective Negotiations and Organising Skills. Tom Mboya Labour College, Kisumu, Kenya
- iv. 21 – 27 April, 2007: Corporate governance Residential Training for Directors of State-owned Enterprises (Corporations) in the Ministry of Agriculture. Whitesands Beach Hotel Mombasa, Kenya.
- v. 9 – 11 April 2007: 3rd African Food Science and Nutrition Conference, Pacific Hotel, Ouagadougou, Burkina Faso.
- vi. 2005 – 2007: Round 1 G&D Rockefeller Fellowship Programme to Enhance Careers of Women Scientists in East Africa, Nairobi Kenya.
- vii. 20 – 23 November 2006: Innovation Africa Symposium, Speke Resort Hotel, Munyonyo, Kampala, Uganda.
- viii. January – June 2006: Capacity Building Course in Agricultural Research for Development, ICRA, Wageningen, The Netherlands.
- ix. 16 – 22 October 2005: Women's Leadership and Management Course; a CGIAR Gender and Diversity Program to enhance East African women Scientists held at International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia.
- x. 23 – 25 February, 2005: Regional Symposium for Postharvest Research Forum in eastern, Central and Southern Africa, Ridar Hotel, Mukono, Uganda.
- xi. 21 – 22 February 2005: AICAD Progress Reports Presentations Workshops, AICAD Headquarters, Juja, Kenya.
- xii. 18 – 19 January 2005: AICAD 4th Call Coordinating Meeting, AICAD Headquarters, Juja, Kenya.

- xiii. 25 November, 2004, Meat and Meat Stakeholders Workshop organised by Kenya Bureau Standards; Silver Springs Hotel, Nairobi, Kenya.
- xiv. 28 – 29 September, 2004: Kenya Bureau of Standards in conjunction with UNICEF: Food Fortification Workshop on *Food Fortification as a Strategy for Micronutrient Control*, Sun and Sand Hotel, Kikambala, Kenya.
- xv. 12 – 16 January 2004: AICAD Research Presentations Workshop and Coordinating Meeting, Silver Springs Hotel, Nairobi. Kenya.
- xvi. 3 – 11 February 2004: AICAD Seminar on Agriculture, Food and water in Africa – Policy and Practice, AICAD Headquarters, Juja, Kenya.
- xvii. 17 – 21 November 2003: AICAD Working Group – Third Call, Proposal Assessment Workshop, AICAD Headquarters, Juja, Kenya
- xviii. 3 – 6 September 2002: KIPI/WIPO Seminar on Intellectual Property for Universities, Moi University, Eldoret, Kenya.
- xix. 4th International Food Technology Course. 15th January to 4th March 2002. Hebrew University of Jerusalem, Faculty of Agricultural, Foods, Nutrition and Environmental Quality Sciences, Division of External Studies, Rehovot, Israel.
- xx. USHEPiA Planning Workshops for International Multidisciplinary Research Projects - Workshop 1: Abiotic stress tolerance in plants. 10th - 11th April 2001, Jomo Kenyatta University of Agriculture & Technology, Kenya.
- xxi. USHEPiA Planning Workshops for International Multidisciplinary Research Projects - Workshop 3: HIV/AIDS. 28 – 29th May 2001, University of Cape Town, Republic of South Africa.
- xxii. FAO/JKUAT Food and Nutrition Workshop for Training of Trainers from Agriculture Institutes, Colleges and Universities. 9 – 13th July 2001. Methodist Guest House, Nairobi, Kenya.
- xxiii. 24 – 26th September 2001: Berlin Alumni Network (BAN) Workshop: Establishment of a Regional Knowledge Base for Quality Assurance of Fish (emphasis on freshwater fish) as a Food and a Commodity. Kenya Trypanosomiasis Research Institute (KETRI) Muguga, Kenya.
- xxiv. UNIDO/IFAD Multi-purpose Village Workshop (MVW) Stakeholders Meeting. 15th November 2001, Federation of Kenya Employers (FKE), Nairobi, Kenya.
- xxv. September 1996 - July 1997: Meat Science and Technology Counterpart Training Programme; Research Student, Okayama University, Japan.
- xxvi. August, 1991- August 1992: Meat Science Technology Counterpart Training; Trainee. Okayama University, Japan
- xxvii. 22nd February - 3rd March 1993: Inaugural Seminar on Applied Food Analysis, Third Country Training Program: participant
- xxviii. 18-19th April, 1991: Workshop on Composite Flours: Formulation, Processing and Usage: participant
- xxix. August 1990: Food Science Subject Matter Workshop for Universities in East Africa Region, Arusha, Tanzania

XI. Consultancies

1. 1 January – 31 March 2001: Survey of Five National Universities in Kenya. Joint AICAD and TAIYO Enterprises Consultancy Project.
2. 2001 – 2002: Joint UNIDO and TOPS Management Institute Sustainable Livelihoods Project: Organisation, training of trainers and target participants involved small-scale enterprise development in the area of Food Handling, Processing and Preservation.
3. 2000 – 2002: Consultant Trainer for the Federation of Kenya Employers (FKE) in their Nutrition, Health and well being programme.
4. January – April 2003: Visiting Lecturer in Food Science and Technology in charge of Meat Technology and Fats and Oils technology, University of Namibia (UNAM).
5. December 2003 to May 2005: Collaborating Consultant in RELMA/ICRAF Project on Assessment Competence Gaps in Linking Agricultural Production with Value adding, Marketing and Policy in Kenya.
6. December 2005: External Examiner for the Department of Food Science and Technology at Kigali Institute of science and Technology, Rwanda.
7. September – November 2006: Consultant Food Processing Expert CDE contract for Agribusiness Development in juice and yoghurt manufacture at Gatore Farm. Kenya.
8. January 2007 (for a 2 yr term): External Examiner, Department of Food Science and Nutrition, University of Nairobi.
9. April 2007 – 2009: Member, Board of Directors, Pyrethrum Board of Kenya.
10. December 2007 – to date: Member, Board of Trustees, International Centre for Development oriented research in Agriculture, Wageningen, the Netherlands.
11. October 2008 – to date: Associate Consultant LOG Associates – Involved in Project evaluation in the areas of Food security, Health, Rural Development and other socio-economic issues and have successfully led 3 teams in such evaluations of national donor funded projects in different parts of the country.

XII. Languages

Language	Written	Spoken	Understanding
English	Excellent	Excellent	Excellent
Kiswahili	Excellent	Excellent	Excellent
Dholuo	Excellent	Excellent	Excellent
Japanese	Poor	fair	Fair
French	Fair	poor	Fair

XIII. List of References

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