

CURRICULUM VITAE

NAME: EDWARD G. KARURI
DATE OF BIRTH: 1948
TITLE: ASSOCIATE PROFESSOR

CITIZENSHIP: Kenyan

MARITAL STATUS: Married with two children

RELIGION: Christian

LANGUAGES: Kikuyu, Kiswahili, German & English

EDUCATION: BSc., Nairobi, 1973
MSc., ETH, Zurich, Switzerland, 1978
PhD., Reading, United Kingdom, 1984

ALUMNI Gold Member, University of Nairobi

PROFESSION: Senior lecturer FIELD: Food Process Engineering

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CURRENT ENGAGEMENT

Academic: Teaching, examining and carrying out research in Food Process Engineering courses, Food Processing and Food Safety to under graduate and post graduate students in the Department of Food Science, Nutrition & Technology, University of Nairobi.

National Assignments:

1. Chairman, Accreditation Board of the Kenya Nutritionists and Dieticians Institute. We regulate the professional practice, accredit and licence training institutions in Kenya as per the KNDI Act of 2007.
2. Chairman, Agribusiness Task Force under the Kenya Agricultural Productivity and Agribusiness Project (KAPAP) in the Ministry of Agriculture.

SUMMARY BACKGROUND EXPERIENCE

I am a Kenyan citizen by birth. I attended local schools in Kenya for my primary, secondary and undergraduate education. My graduate studies were undertaken in Switzerland (Swiss Federal Institute of Technology (ETH)) for Msc. and England (National College of Food Technology (NCFT), Reading University) for PhD.

I have accumulated over 20 years of lecturing in the University after with a PhD. in 1984. Main area of specialization is Food process Engineering. This graduating covers the Unit operations in food processing, Food Engineering systems and Measurement and Control Engineering.

Soon after graduation I was employed by the food industry as a production foreman for approximately 3 years. I have hands-on knowledge in the manufacture of fruits and vegetable products. I worked for reputable firms like Del Monte in Thika , Kenya. I also enjoyed industrial attachment locally with Nestle Foods(1978) and overseas with Bischofszell Conservenfabrik, Switzerland(1976). For eight years I participated in the rehabilitation programme of the Pan Vegetables Ltd. in Naivasha. This was a dehydrating firm for export vegetable products.

My contribution in the local food industries is seen in consultancy reports, training workshops in UNIDO, UNDP, ILO and FKE(Federation of Kenya Employers) and actual commercial products designed under my instruction. That has benefited both the large and small scale food industries in Kenya and in particular women in search for income generation. One Survey conducted in 1992 led to development of training workshops on Management and Technology which had been identified as the major needs of the small scale food industry at that time. Currently, women are benefiting from the Women Entrepreneurship Development(WED) under UNIDO support.

The search for problems and constraints in the micro, cottage and small scale food industries in the sub- Saharan Africa continues under various donor support. SMALLFOOD project funded by EC has been executed in the Department of Food Technology where I participated.

The exposure in the sugar and coffee industry, in regard to production, processing and marketing, has been extremely useful in the delivery of my commodity technology and Engineering Systems lectures. I am very familiar with the Kenya Sugar Industry, having participated in the Sugar Pricing Committee of the Kenya Sugar Authority for six years. I understand the Kenya coffee industry as a small scale coffee farmer- processor(my hobby) and also as lecturer in the technology of Coffee. A lot of travel is involved to attend technical seminars and meet with other professionals in my field.

The latest challenge in the University is income generation by each production unit to support the academic programmes. We have done well in this area and are now manufacturing and commercialising the meat and milk products in a project that is bound to expand and capture a reasonable market share in the interest of the future of our Institution.

In my area of specialisation there are very many challenges in the design of processes and products for an endless list of raw foods. The products have to be sellable, nutritious, safe and culturally acceptable. This has been possible through application of appropriate technology that is suitable for our developing world. Our Institution was the first beneficiary in terms of establishing a commercial bakery for bread and semi-continuous chapatti production unit. This aimed at the production of hygienic chapatti, in particular, to benefit the University of Nairobi student community. I was instrumental in the planning through to the implementation of the project.

We have carried out several successful research projects with graduate students. One of them was a SIDA supported Lake Victoria Fish project looking at microbial and pesticide contamination, hence the safety of the fish products in the local and export market to the European Union.

I am well acquainted with the problems of the small dairy industry in Kenya . I take advantage of the well established dairy pilot plant which doubles as a teaching laboratory and a commercial unit to teach extension processing to dairy farmers and demonstrate Research and Development activities. The pilot plant currently processes most of the milk from the University farm.

A very successful project relevant to Agribusiness was concluded in September 2004 for Export processing Villages in Kenya. The clients were the International Trade Centre, Geneva, Switzerland, UNDP and the Export Promotion Council, Kenya. I led a team of experts in horticulture, economics, Finance and Food Technology.

In the meantime research and development work continues targeting particularly child malnutrition by designing affordable, acceptable, nutritious and safe food interventions. We have designed products based on the orange-fleshed sweetpotato as a food based intervention to combat Vitamin A deficiency in Africa.

I have benefitted significantly from the application of nuclear technology for peaceful purposes when I served as the Kenya RAF/8/033 project under the International Atomic Energy Agency (IAEA). This taught me networking with global collaborators in value addition to raw materials for agriculture, industry and human health care products. I chair the committee on Food processing by Ionizing radiation under the Radiation Protection Board.

Currently agricultural sector is focusing on agribusiness. I participate in seven value chains under KAPAP funding.

I embrace ICT in delivery of lectures and multi-tasking in research projects.

CURRENT RESEARCH INTERESTS:

- ◆ Design of small-scale food processing plants
- ◆ Protective packaging and storage of foods
- ◆ Application of nuclear technology in food preservation and improvement of engineering materials

Food quality and food safety with reference to i) canning beans ii) beef iii) rabbits and iv) farmed fish

EMPLOYMENT & EXPERIENCE

(a) Academic Background:

Bachelor of Science Physics/Chem University of Nairobi 1973

Master of Science Food Technol. ETH, Zurich, Switzerland, 1978

Doctor of Phil. Food Engineering NCFT, Reading, UK 1984

(b) Part-time employment:

Industrial attachment with a Foods manufacturing firm,
Bischofszell Conservenfabrik, Switzerland 1976

(c) Permanent Employment

Food Production Foreman, Del Monte Co. Ltd. Thika, 1973 – 1975

Tutorial Fellow Univ. of Nairobi 1978-1984

Lecturer 1984-1991

Head, Food Engineering Section & co-ordinator Pilot Plant Processes	“ “	1984 – present
Senior Lecturer	“ “	1991 –1999
Chairman Department of Food Science & Technology,		1998-Feb. 2004
Associate Professor		1999-

OTHER RESPONSIBILITIES

(a) Department Level

Supervision: Msc Students
Phd Students

1. M. H. Sserunjogi, 1988. Production of Shelf-stable pasteurised and canned Coconut milk. MSc. Thesis.
2. J. K. Githaiti, 1990. Use of Pectolytic enzymes in Mango juice processing. MSc. Thesis
3. N.K.O. Ojijo, 1991. Objective Evaluation of quality changes in growing and stored sweet potatoes. MSc Thesis
4. S.M. Warui, 1991. Utilization of sweet potato as a base for soft drink Manufacture. On-going MSc Thesis project.
5. Wanjekeche, 1991. Direct utilization of tropical root/tuber fresh pulps in baking. Completed MSc. Thesis project.
6. J. Kabira, 1991. The feasibility of producing low-cost solanum potato flour and its potential food uses in Kenya. PhD. Thesis.
7. Chania, J. V. 1997. Assesin the effectiveness of comfrey as a source of Vitamin A in school feeding programme
8. R. S. Mizray, 1998. Nutrient content of amaranthus vegetables grown in Dar Es Salaam. MSc. Thesis
9. B.T. Feleke, 1998. Food intake and the Micro-Nutrient availability in and outside of Kakuma Refugee camp, Kenya. Msc.Thesis
10. W.J. King'ori , 1998 .Contribution of sweet potatoes in accessibility of food and consumption among households in Nairobi, Kenya. Msc.Thesis

11. S. Mwaura, 1998. An assessment of metal contamination of sweet potatoes. Msc.Thesis
12. D.K. Edebe, 1998 Utilization of sweet potato roots in the formulation of a cereal based food for children.Msc.Thesis
13. C. Owori, 1999. Evaluation of processing techniques for quality improvement of sweetpotato flour based Kabalagala. PhD.Thesis
14. A. M. Mwaniki, 2001. Utilization of locally grown raw materials in the production of intervention weaning food for the malnourished children in marginal areas of Kenya: Case for Makindu in Eastern Province(MSc)
15. C. M. Mwangi, 2000. The quality and level of contamination of fish and the fishing environment of Lake Victoria in Kenya(MSc)
16. P. W. Ngunjiri, 2000. Quality changes in stored orange fleshed sweetpotato flour (MSc)
17. T. Felekhe, 1999. Status of food security in the Kakuma Refugee Camp of Kenya, (PhD)
18. Karanja Warigi Paul R. 2007 Antifungal activity of chitosan on mango spoiling fungi (MSc)
19. Mutwiri Thari William 2006. Textural characteristics of lactic fermented sweetpotato and its performance as sausage filler (MSc)
20. Sigei Dickson Kiplang'at. 2006. Health, nutrition and sanitation baseline survey of 6-59 month old children in Nyakacho, Matobo Location , Kericho District, Kenya (MSc)
21. Muchina Emily Njeri 2006. Maternal breastfeeding practices in relation to growth and nutritional status of children aged 0 to 24 months in Nairobi (MSc)
22. Charity Nasirian Tauta 2006. factors associated with the prevalence of anaemia among pregnant Maasai women attending ante- natal clinic in Kajiado District Kenya (MSc)
23. Wanjekeche Elizabeth (2005) Effect of treatment on cookability and L-dopa content of Mukuna beans (PhD)
24. Walingo Alice (2006) Effect of processing parameters on the quality of proteins from local leafy vegetables(PhD)
- 25 Joyce Wambua Mue (2006)**
The role of drought tolerant food crops in food and nutrition security status among low income households in Kasikeu Division, Makeni District, Kenya
- 26. Wanjohi Pauline Muthoni (2006)**
Vitamin A and nutritional status of children aged 24-72 months in Nambale Busia District, Kenya. (a comparative study of Households with and without Home Gardens).
- 27. Beka Teshome Bongassie (Orion) (2007)**
Levels and determinants of stunting among children less than five years of age in west Gojam zone, Northern Ethiopia.
- 28. Emily Njeri Muchina. (2007)**
Maternal Breastfeeding practices in relation to growth and nutrition status of children aged 0-24 months in Nairobi, Kenya.
- 29 Charity Naserian Tauta (2008)**
Factors Associated with the prevalence of Anaemia among Maasai and Non-Maasai women attending Antenatal Clinic in Kajiado District , Kenya.

30. Ooko Abong George, (2008). Physical and chemical characteristics of Kenyan potato cultivars for processing to deep frozen French fries
- 31 Beatrice W. Mungai (2009)**
Infant Feeding Options and their Implications On Nutritional Status of Children 0-6 Months Born to HIV Positive Mothers in Nairobi Slums. .
- 32. Gladys M. A. Ombongi (2009)**
Contribution of Sugar Sweetened Beverages to Caloric and Vitamin C Dietary Intake and Nutritional Status of School children aged 10 – 13 years in Westland's, Nairobi.
33. Sellina Ayoma Onyango (2010). Daily intake and quality of drinking water among children aged 10-12 years in Westlands Division, Nairobi, Kenya
34. Ruth Nematei Tiampati (2007). Gender dimensions in childcare and nutrition among Maasai children aged 6-59 months in Narok Central Division, Narok Kenya (A human Rights Approach) .
35. Warui, Samuel (2010). Utilization of endogeneous amylases and pectinex enzyme for efficient extraction of sweetpotato juice.
36. James Njiru Kanyuira (2010). Household food security and nutritional status of children aged 6-59 months in Mwea- Tebere Rice Irrigation Scheme.
37. Hannah Muthoni Kiarie (2010). Care givers formal and nutritional literacy and its influence on nutritional status of preschool children in Munyu, Thika East District, Kenya.
38. Mercy K. Mwenda (2010). Role of social protection on nutritional status of elderly persons: the case of Imenti North District, Kenya.
39. Anne M. Wangalachi (2010). Development of vitamin A – fortified mango nectar for primary school children in Kenya
40. Florence Nabwire (2011). Dietary diversity and prevalence of maternal night blindness among women in rural Kenya: a comparative study of selected sub-locations in Makindu, Kilifi and Kisumu – East Districts.
41. Musyoka Faith Mutave (2011). Contribution of school lunch to dietary diversity and adequacy of nutrients among primary school children during Ramadhan in Kisauni District, Kenya
42. Alice Wairimu Theuri (2012)
Factors associated with rickets among children aged 6-59 months at Kiambu District Hospital.
43. Eunice W. Gathu (2012). Physico-chemical characterization of new drought tolerant beans for canning purposes.

NEW STUDENTS

44. Mutai E. B.K.(PhD). A dynamic model of the hygrothermal environment in a broiler chicken house.

45. Chirwa, M.M. (MSc).The effect of cash transfer programme on the nutritional status of households in Zambia.

46. Josphat Njenga G.(MSc) Analysis of the Networks and Traceability Systems of Organic Food Value Chains in the Tourism Industry in Kenya

47. Barugahara Evelyline Isingoma (PhD). Effectiveness of improved therapeutic porridge in the management of common nutritional deficiencies in preschool children in hoima district, western uganda

OTHER EXPERIENCES

(b) **Departmental level**

Co-ordinator, Industrial Training for FST students, 1984-87

Co-ordinator: The Pilot Plant processing operations for student practicals, research and semi-commercial operations since 1984

(c) **Faculty Level**

Chairman, Industrial Technical Committee, Food Processing, Ministry of Labour and Human Resource Development

(d) **National level**

Member of Science Technology National Panel, KIE

Member of the Technical Education Course Panel, KIE

Member of the Kenya Institute of Food Science & Technology

Director, Pan Vegetable Processors, Naivasha ,1986-1994

Member of the sugar price review committee of the Kenya Sugar Authority 1993-1995

Director, ICDC Minet (AON Minet) Insurance Brokers Company, 1988- 1999.

Chairman, Food Processing and Allied Industries, DIT, Ministry of Labour and Human Resource Development, 2002 - 2008

EXTERNAL EXAMINER:

i). Egerton University for 7 years in the Department of Dairy and Food Technology

ii). Jomo Kenyatta University of Agriculture and Technology for 4 years in the Department of Food Science and Technology

iii). Chepkoilel University for 3 years in the Department of Family and Consumer Sciences

(e) **International**

Member of the International Infrared Committee, since 1990

Member of the International Society of Tropical Root Crops, since 1988

Chairman, FOODNET a network of ASARECA, July 2001-July 2003

Chairman, Kenya VITAA(Vitamin A for Africa partnership), 2001-2006

Project Coordinator, International Atomic Energy Agency(AFRA Projects):

Project co-ordinator, RAF/8/033:Processing for materials and environmental applications 2002-2006

Project co-ordinator, RAF/8/044: Radiation processing for human Health 2007-

Project Co-ordinator, RAF/7/006: Using isotope technique to assess nutrition intervention programmes related to HIV/AIDS in Africa

CONTRIBUTION TO THE LOCAL FOOD INDUSTRIES/INSTITUTIONS

E.G. Karuri, 1984: Technical improvement of the drying process for Mt. Kenya Vegetable Processors, Kiganjo, Nyeri, to improve the quality of the dried products.

E.G. Karuri, 1985: Finding out the optimum bulk handling methods for export coconut in shell, Puffins Ltd., Nairobi

E.G. Karuri, 1985: Supplementary water project for Kabete Campus. Funds from Swiss Government. Project design and supervision at implementation.

E.G. Karuri, 1986: An extension service project to establish a rural small-scale juice concentrate industry for the Kwench Co., Nairobi.

E.G. Karuri, 1986: Rehabilitation programme for Pan Vegetable Processors, Ltd. Naivasha. Ended 1993 with change of ownership

E.G. Karuri, 1987: Determination of metal pick-up in canned pineapple products, Del Monte, Kenya Ltd. A packaging problem.

E. G. Karuri & E.L. Keya, 1990/1991. Establishment of the University of Nairobi Bakery for production of Chapatti and Bread . Project completed and commissioned for the commercial production.

E.G. Karuri, 1989/1991: Pilot production of yeast extract with the Kenya Breweries Ltd. Project carried out in the departmental pilot plant.

E.G. Karuri, 1993/1994: Development of the process for production of iodized free-flow salt for the Kenyan market. Client: Melvin Marsh International, Nairobi. Salt is now in the market.

E.G. Karuri, 1997/1998:Development of the process for production of hygienic opaque beer powder for the Kenyan market. Client : Reechem's Food Company, Nairobi. The product is a real success story.

E. G. Karuri, 1997/1998:Co-ordination and optimization of the pilot plant processes for income generation. Department of Food Technology & Nutrition

COLLABORATIVE PROJECTS

1987: **Conservation** of fruit/vegetables. Collaboration with TDRI/ODA, London, and Horticultural Research, THIKA

Manufacture of instant cooking-banana Product. Collaboration between the Univ. of Nairobi and the University of Ibadan, Nigeria

The **production** of sorghum-based instant "uji". Project supervisor for Higher National Diploma studies. The Kenya Polytechnic & Nestle Foods Kenya Ltd. Project concluded in 1987.

Development of food product for weaning babies. Project supervisor for Higher National Diploma studies. The Kenya Polytechnic Nairobi and the Kenya Bureau of Standards (KBS). Project concluded in 1987.

Development of a weaning food for infants. **Member** of the Nutribusiness linkage programme between University of Nairobi-Penn State -Tuskegee University.

Consultant participation in the Sugar price review group in 1992 and 1995 for the Kenya Sugar Authority.

FOODNET projects (2002-2004)in strengthening the food commodity networks under the umbrella of ASARECA. Funded by USAID

OTHER PROJECTS

Chemical characterization of cocoa pectin. 1976, ETH, Zurich. Supervised by Prof. Amado.

Production of maltextract and breakfast powder. Project by E. G. Karuri and C. M. Amoth. 1976, ETH, Zurich. Supervised by Prof. Dr. Felix Escher.

Marketing of Irish Potatoes in Kenya. FOODNET project FNET G10

Bio-fortification Challenge programme for Beans and Sweetpotatoes. CIAT/CIP Collaboration. USAID funding

VITAA project. Bio-efficacy of orange fleshed sweetpotato in combating Vitamin A deficiency in pre-puberty Children aged 7-11 years in Kenya. USAID funding

Market opportunities for cassava starch, cassava products and cassava snacks in Kenya. FOODNET project no. FNET G3.

KAPAP FUNDED PROJECTS

Cassava production, processing and marketing in Kenya. KAPP Project
2006/2008

Oil Palm production, processing and marketing in Kenya. KAPP project, 2007/2009

CONFERENCES/WORKSHOPS ATTENDED

- ◆ International Solar energy Society, Brighton, UK., 1981
- ◆ Third International Symposium of Solids Drying, Birmingham, UK. 1982
- ◆ Third International Congress of Engineering and Food, Dublin, Ireland, 1983
- ◆ Seminar on Packaging, USID/KAM/KIFST, Nairobi, 1985. Presented paper on “The state of food packaging in Kenya”
- ◆ International Conference on Energy, Food Production and Post-harvest Technology, ANSTI/UNESCO, Nairobi, 1986. Presented paper on “The application of Direct solar radiation to the dehydration of foods”.
- ◆ Workshop on DROUGHT in KENYA, UNEP, Nairobi, 1986. Offered two papers:
 - Dehydration of foods by direct solar radiation (E. G. Karuri) and
 - Use of meteorological data for post-harvest Technology (Some, D. K. and Karuri, E. G.)
- ◆ Advanced Workshop on Microcomputer Application, Kiel, Germany, 1986

- ◆ ANSTI Conference on “Appropriate technologies in agricultural production & processing in Africa. Arusha. Tanzania. April, 11-14, 1988.
- ◆ 8th. Symposium. International Society of tropical root crops. Bangkok, Thailand. 1987. Paper presentation
- ◆ 2nd International Near Infrared Spectroscopy conference. Tsukuba Science Centre, Tsukuba, Japan. 1989. Poster presentation.
- ◆ FNSP in-service Computer training (advanced session). Agriculture Resources Centre, Egerton University, Kenya. June, 1990.
- ◆ 3rd International Near Infrared Spectroscopy Conference. Brussels, Belgium, June, 1990. Poster presentation
- ◆ International Symposium on Sweet Potato Technology for the 21st Century. Tuskegee University, Alabama, USA. June 1-6, 1991. Paper presentation.
- ◆ Kenya Association of Manufacturers Seminar on Quality Control for Food Industries. Panafric Hotel, Nairobi. 26th – 30th Aug. 1991. Two papers presented.
- ◆ Kenya Institute of Food Science and Technology Seminar on Quality Control and Management in Food Industries. Panafric Hotel, Nairobi. 9th – 13th Sept. 1991. Presented 2 papers
- ◆ Workshop on Participatory Research. Organized by Applied Human Nutrition, DFTN. Methodist Guest House, Nairobi. 23rd – 27th Sept. 1991.
- ◆ Writing Workshop to Develop a Training Manual on Process, Product and Market Development for Root and Tuber Crops: an integrated approach. IITA, Ibadan, Nigeria. 1991.
- ◆ International Symposium on Postharvest Treatment of Horticultural crops. Postharvest 1993. Kecskemet, Hungary. Organised by International Society for Horticultural Science.
- ◆ 17th International Conference on Coffee Science (ASIC’97). 20-25 July 1997, Nairobi, Kenya.
- ◆ International Seminar on Product and market development for tubers and root crops. IITA/KARI. ILRI. Nairobi. August 1997
- ◆ Network Planning meetings .Finalization of network plans : Second Generation Networks. 15th-20th June , 1998.Entebbe , Uganda. Sponsored by ASARECA.
- ◆ International conference on School Milk in the 21st Century.27th –29th October 1998.Kwa Maritane, South Africa.

- ◆ International Workshop strategies for strengthening small scale food processing enterprises in Eastern and Southern Africa. NARO , DSE and CTA. Entebbe , Uganda: 2nd –6th Nov ,1998
- ◆ Workshop on small food processing project. Reading University, Reading ,U.K . 5th-13th Dec,1998
- ◆ Workshop on small food processing project. Harare, Zimbabwe:1st-8th May 1999
- ◆ Workshop on Food Processing and Nutrition. Victoria Falls, Zimbabwe. Feb. 2000.
- ◆ Global Postharvest Conference. CIRAD, Montpellier, France. July 2001
- ◆ Technical Cooperation Project Development Workshop, Vienna Nov. 2001
- ◆ Scientific Visit. National Nuclear Research Centre, Tunisia. Sept. 2002
- ◆ Training on Irradiation of Natural polymers, Cairo, Egypt. Oct. 2002
- ◆ World Packaging Exhibition/ World Food process Exhibition, Paris-Nord Villepinte, France. Nov. 2002
- ◆ Coordination Training Workshop for irradiation of materials and environmental applications. Cairo, Egypt. March 2003
- ◆ ASARECA Priority Setting Workshop. Entebbe, Uganda. May 2003
- ◆ FOODNET Priority Setting Workshop. Nairobi, July 2003.
- ◆ Training Worksoop on “Radiation treatment of agro wastes”. Tangier, Morocco, October 2003
- ◆ 13th Symposium of the International Society for Tropical Root crops, Arusha, Tanzania, Nov. 2003
- ◆ Industrial Attachment Workshop. Ministry of Labour and Human Resource Development. Directorate of Industrial Training. Lake Bogoria Hotel. Jan. 2004
- ◆ 14th Symposium of the International Society for Tropical Root crops, Mombasa, Kenya, October 2005.
- ◆ Co-ordination Workshop. Project RAF/8/033. Training for irradiation of materials and environmental applications. Cairo, Egypt. June 2006

- ◆ VITAA and Harvest Plus-Sweetpotato Crop meetings. Alpha Palace, Kigali, Rwanda. October, 2006.
- ICRISAT Training Workshop on Sorghum and millets, Equatorial Hotel, Kampala Uganda, Oct. 2007
- ◆ Co-ordination Workshop. Project RAF/8/044. Training for irradiation of materials and environmental applications. Hotel Khaldouin, Tunis, Tunisia. April, 2008

INDUSTRY LINKAGES :

- 1. Chairman, Food and Allied Industries Sectoral Committee, in the Ministry of Labour and Human Resource Development**
- 2. Member, Food and Allied Industries Sectoral Committee, in the Ministry of Labour and Human Resource Development, 2007-2009**
- 3. Member of the Technical Committee for the National Industrial Attachment Programme**
- 4. Kenya Dairy Board : Initiating Preparation of MOU with the University of Nairobi for collaboration.**
- 5. Initiation of linkages with LANDMEEP, an NGO that trains our Food Science Students to participate in training the local communities in food processing**
- 6. Member of the DIT committee for Local and Overseas Training 2007-2009)**

THESES, PUBLICATIONS and REPORTS

***Karuri, E.G. 1978.** The effect of processing parameters on the final quality of food dried by a single Drum Drier (MSc thesis). University of Nairobi & Swiss Federal Institute of Technology, Zurich.

***Karuri, E.G. 1984.** Application of Radiant Energy to the Dehydration of Foods (PhD. Thesis). University of Reading, UK.

Karuri, E.G., 1985. The performance of a concentric tube solar collector. Research note.

***Karuri, E.G. 1986.** The application of direct solar radiation to the dehydration of foods . Proceedings of the International Conference on Energy, Food Production and Post Harvest Technology in Africa (Nairobi, Kenya, 16-18 April 1986. ANSTI/RAIST. Pp. 53-70.

***Karuri, E.G. 1988.** The effect of processing conditions on the quality of drum dried cassava. Proceedings of the eighth symposium of the International Society for Tropical Root Crops. Bangkok, Thailand. Oct. 30 – Nov. 5, 1988. Pp. 407 – 415.

Mbugua, S.K., E.G. Karuri and N. M. Muroki 1989. Simple meat preservation methods applicable in rural areas in Kenya. Paper presented to FAO Seminar on Meat Preservation Techniques applicable in rural areas. Food Research Centre, Accra, Ghana. October, 1989.

Mbugua, S. K., E.G. Karuri and T.A. Likimani, 1989. Opportunities for and Constraints to the Industrialisation of food crops in Kenya. Paper presented at the IUFOST/IARC symposium, FAO, Rome. December, 1989.

***Karuri, E.G. and J. G. Brennan, 1990.** Energy use and drying time estimation in Thermal radiant drying of foods. Proceedings of the Third International Conference on Near Infrared Spectroscopy. Brussels, Belgium. Vol.1 Pp. 297-303.

Githaiti, J. K. and E.G. Karuri*, 1991. Pectolytic enzymes in producing mango juice Acta Alimentaria, Vol.20 (2) pp. 97 – 102

Mbugua, S. K. and E. G. Karuri*, 1994. Preservation of beef using bacteriostatic chemicals and solar drying. Food and Nutrition Bulletin, Vol. 15, No. 3. Pp 262-268. United Nations University

Ojjo, N.K.O and E.G. Karuri*, 1993. Cooking characteristics of three sweetpotato cultivars grown in Kenya. Product development for root and tuber crops. Vol.2., Africa. 367-372.ISBN 92 9060 163 9.CIP/IITA/CIAT

Karuri*, E.G and N.K.O. Ojjo, 1994. Storage studies on Sweetpotato roots: experiences with KSP20 cultivar. Acta Horticulturae 368, 441-452.ISBN 90 6605 236 8.International Society for Horticultural science .

Karuri*, E.G. and V. Hagenimana, 1995. Use of ambient conditions and saw dust in storage of sweetpotato (*Ipomoea batatas* L.) roots in Kenya. Zimbabwe Journal of Agricultural Research. Vol.33(1),83-90.

Muroki, N.M., Maritim, G.K., Karuri*, E.G., Kogi- Makau, W., Imungi, J.K. and Tolong, H.K. 1997.

Involving rural Kenyan women in the development of nutritionally improved weaning foods. Nutribusiness strategy. Journal of Nutritional Education.Vol .29(6): 335-342

Karuri, E. G. 1992: A solar simulator for direct ration solar drying of foods. Proceedings of the Kenya Soc. of Agric. Engineers. Engineering for sustainable development. JKUAT. 95-105.

Karuri, E.G .1997 .The state of water in stored dry cereal grains and legumes .The J.of Food Technology in Africa .Vol.2.(1)15-21.ISSN 1028 6098

Karuri, E.G .1995. Adsorbed water in dry vegetables. KIFST Preceedings.Proceedings of the second KIFST Conference. 8th –10th Nov., Nairobi, Kenya. ISBN:9966 923 48 9 .PP 108-112

Karuri *E.G. and J.K. Githaiti, 1998. Commercial pectolytic enzymes in production of mango juice concentrate. J. of Food Technology in Africa Vol.2(4), 82-86.

Fawzia, A., Karuri*,E.G., and Hagenimana,V. 1999. Sweetpotato ketchup: Feasibility , acceptability and production costs in Nairobi, Kenya. African Crop Science Journal, Vol.7(1), 81-89.

Hagenimana, V., Karuri*, E.G. and Oyunga, M.A. 1998. Oil content in fried processed sweetpotato products. J. of Fd. Proc. and preservation,22, 123-137.

E. G. Karuri, 1998. The development of the school milk programme in Kenya. A country paper presented at the International conference on School Milk in the 21st. Century. Kwa Maritane, Pilanesberg National Park, North West Province, South Africa, 27-29th Oct. Conference proceedings, p106-118.

Mizray, R.S.,Imungi, J.K. and Karuri, E. G., 2000. Changes in ascorbic acid, Beta-carotene and sensory properties in sundried and stored *Amaranthus Hybridus* vegetables. *Ecology of Food and Nutrition, vol. 40,53-65.*

Mizray, R.S.,Imungi, J.K. and Karuri, E. G., 2001. Nutrient and anti-nutrient content of raw and cooked *Amaranthus hybridus*. *Ecology of Food and Nutrition, vol. 39,459-469.*

Karuri, E.G., A.M. Mwaniki, J.N. M'Thika and P.M. Kimani, 2001. Evaluation of dry mature pigeonpea seeds for processing and eating quality in: Pigeonpea. Status and potential in Eastern and Southern Africa. International Crops Research Institute for the Semi- arid Tropics. Gembloux Agricultural University. Pp. 167-173.

Wheatley, C.,G.J. Scott,R. Best and S. Wiersema, 1995. Adding value to root and root tuber crops. International Center for Tropical Agriculture.ISBN 958 9439 14 4. **Contributed to the development of the manual**

Kimani, P.M., Karuri, E. and Mwaura, S. 2006. Iron, Zinc and protein concentration in African bean cultivars. In: BIC (Beans improvement cooperative). Annual report, East Lansing, MI, USA v.49, 155-156.

S. Ferris, A. Muganga, R. Matovu, S. Kolijn, V. Hagenimana and E.G. Karuri, 1999. Marketing opportunities for starch and high quality flour production from cassava and sweetpotato in Uganda. Postharvest Systems project report. ESARC and IITA, Kampala, Uganda. **IITA Monograph**

Karuri, E.G., Mbugua,S.K., Karugia, J., Wanda, K. and Jagwe, J., 2001. Marketing Opportunities for cassava based products: An Assessment of the Industrial Potential in Kenya. FOODNET

Abong', G.O; Okoth, M.W; Karuri E.G; Kabira J.N. and Mathooko F.M. (2009). Influence of potato cultivar and stage of maturity and oil content of French fries (chips) made from eight Kenyan potato cultivars. African Journal of food, Agriculture, Nutrition and Development 9(8), 1667-1682. (www.adfand.net)

M.W. Okoth, J.K. Imungi, E.G. Karuri and J.N. Njenga

Seminar on Food Science and Technology special project proposals and research findings. Makerere University/University of Nairobi academic exchange, Kabete, January 15, 2009

Abong' G.O., Okoth M.W., Karuri E.G., Kabira J.N. and Mathooko F.M. (2009)

Levels of reducing sugars in eight Kenyan potato cultivars as influenced by stage of maturity and storage conditions. Journal of Animal and Plant Sciences, Vol.2, issue 2: 76-84. (<http://www.biosciences.eleva.org/JAPS>)

Mutai, E.B.K, Gitau, A.N., Aganda,A.A. and Karuri, E.G. 2010. ICASTOR Journal of Engineering. Vol. 3. No.2, 105-120.

Gathu E.W., Karuri, E.G. Njage, P.K. and Kimani, P.M. 2011. Physical and chemical characterization of new drought tolerant beans lines for canning quality. Conference Poster. aGRO 2011 Conference. College of Agriculture and Veterinary Sciences, University of Nairobi.

Wanjekeche, E., Imungi, J.K. and Karuri, E.G. 2012. Effect of soaking on the cookability and nutritional quality of mucuna bean. The 12th KARI Biennial Scientific Conference. www.kari.org/biennialconference/conference12/docs/contents.htm

Gathu, E.W., Karuri, E.G. and Njage, P.M.K 2012. Physical characterization of new advanced drought tolerant common bean (*Phaseolus vulgaris*) lines for canning quality. A. Journal of Food Technology 7:22-28.

RECENT SEMINARS/CONFERENCES ATTENDED

Development of Defensive driving Training Programme for Kenya. Sponsored by DIT, Ministry of Labour. Lake Elmentaita Country Lodge 17-19 September, 2009.

Canning Beans (Navy beans) project stake-holders Inception Workshop. Agricultural Information Resource Centre (NARL) Nov. 3, 2009. Nairobi.

Role of Private Sector towards compliance realization. Pan African Agri-Trace Conference – Red Court Hotel 13-15 October 2009. Authors:- Zipporah W. Kiruthu and Edward G. Karuri.

Standards Contribution to the Food Sector in Africa. 23rd-27th April 2012. InterContinental Hotel, Nairobi. ISO Regional Workshop/TC 34.

Agribusiness Value Chain Financing Conference. AbSS/FAO. 8th June, 2012, Safari Park Hotel, Nairobi.

Sensitization Workshop for Nutritionists and Radiation Councils. CDC Emory Project. 30th May, 2012. SilverSprings Hotel, Nairobi.

Health Sector Inspection Reform: Towards effective and efficient joint inspections. 14th-16th May, 2012. Great Rift Valley Lodge and Golf Resort.

Atomic Energy Policy and Bill Stakeholders. 17th May, 2012. Laico Regency Hotel, Nairobi.

CONSULTANCIES

Prof. E.G. Karuri (Completed)

1992. Needs Assessment in the food processing sector. Funded by UNDP.

1999. University Bakery for bread and chapatti production. Funded by the University of Nairobi.

2007. Export processing villages (EPV) for mangoes in the Eastern and Coast provinces of Kenya. Work done for the Export Promotion Council. Funding by UNDP. 2007.

2003. Supply chain analysis for horticultural crops, cut flowers and potato in Kenya. FAO/UNIDO project.

Scale-up of baculovirus – based bio-pesticide production in Kenya. Sponsored by PIP/COLEACP for Kenya Biologics Ltd, Thika. Aug/Sep 2009.

UPDATES

Workshops attended:

1. Developing the mandate of the newly constituted Local and Overseas Training Committee. Workshop held at the Kenya School of Monetary studies on 12th- 14th March 2010. Directorate of Industrial Training, Ministry of labour and Human Resource Development.

3. Karuri et al 2010. Workshop report. "Developing the mandate of the newly constituted Local and Overseas Training Committee". Directorate of Industrial Training, Ministry of Labour and Human Resource Development

4. Development of Guidelines for Training in Defensive Driving. Workshop held at Lake Elmentaita Resort Hotel, Rift Valley. 17th-19th Sept., 2009. Directorate of Industrial Training, Ministry of Labour and Human Resource Development

5. Karuri et al 2009. Trainers' Guidelines for Defensive Driving. For use by Supervisory and management Trainers in Kenya. Directorate of Industrial Training, Ministry of Labour and Human Resource Development

6. Technical Committee (2010). Development of Guidelines for The National Industrial Attachment Scheme. DIT, Ministry of Labour and Human Resource Development

OTHER EVENTS

17th- 21st May 2010. FIRST AID TRAINING by St. Johns Ambulance Staff. CAVS, Kabete Campus
20th April, 2010. Inauguration of the First Council of Kenya Nutritionists and Dieticians Institute. Ministry of Public Health. AFYA HOUSE
Stakeholders' Workshop, 2009. Jacaranda Hotel. Food Safety and Quality syllabuses for Certificate, Postgraduate Diploma and MSc programmes at the Department of Food Science, Nutrition and Technology
10th- 13th Feb. 2010. Development of BSc. Programme in Fisheries and Aquaculture Management. Kenya Marine and Fisheries Institute, Mombasa

NEW APPOINTMENTS:

- April 2010. Representative for the Kenya Nutritionists and Dieticians Institute(KNDI) at the Kenya Bureau of Standards(KEBS)
- March 2010. Chairman. Nutrition and Health Technical Committee. Kenya Bureau of Standards
- April 2010. Member. Editorial Advisory Board. Food Chain Journal, United Kingdom.
- Dec. 2010. Chairperson of the Accreditation Board of the Kenya Nutritionists and Dieticians Institute (KNDI, established by ACT 2007). Appointment by the Minister for Public Health and Sanitation.
- July 2012. Chairperson of the Agribusiness Task Force (ATF) for the Kenya Agricultural Productivity and Agribusiness Project (KAPAP), Ministry of Agriculture.
- Departmental Co-ordinator, Industrial Training for FST students, June 2012-. Taking advantage of my experience of the current policy by the National Industrial Training Authority(NITA, formerly DIT).

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