

## **PROFESSOR OJIJO, N. K. O., PhD.**



**NELSON KENNEDY OLANG'O OJIJO**

### **SUMMARY**

Nelson Kennedy Olang'o Ojijo has been a member of the Department of Food Science & Technology at Jomo Kenyatta University of Agriculture & Technology (JKUAT) since 1995. After graduating at the top of his class with an honors degree from the University of Nairobi in 1987, he was retained in the Department of Food Technology & Nutrition, Faculty of Agriculture, as a Graduate Research Assistant pending his enrolment for a postgraduate course. On completion of his M.Sc. degree in 1991, he was employed by Coffee Research Foundation, Ruiru, Kenya, as Head of Coffee Bean Quality Unit. In 1995, he moved to Jomo Kenyatta University of Agriculture & Technology (JKUAT) as a Lecturer. He was awarded a Monbusho Scholarship by the Japanese Government to undertake a four-year PhD course in Food Process Engineering, tenable at the Department of Biosystems Engineering, Institute of Forestry & Agricultural Engineering, University of Tsukuba, Japan, from 1996. Upon graduation in 2000, Dr. Ojijo returned to JKUAT where he attained Senior Lectureship in 2002. In the same year, he served as a Visiting Lecturer in Food Engineering at the Department of Food Science & Technology, University of Namibia, and later proceeded on a two-year UNESCO/Israel postdoctoral fellowship at The Department of Biotechnology & Food Engineering, The Technion, Israel Institute of Technology, Israel. Upon his return to JKUAT in 2004, Dr. Ojijo became involved in funded research projects on exploitation of oil seeds for the production of value-added products like biodiesel, and value-chain processing of indigenous African leafy vegetables for food security and poverty reduction. He has also been involved in undergraduate and postgraduate student research supervision and various teaching and administrative assignments. He has delivered papers and mounted posters at several international professional conferences. He is also widely published in internationally acclaimed peer-reviewed journals, and a member of local, regional, and international professional bodies, notably the International Society of Food Engineering (ISFE). Dr. Ojijo was appointed an Associate Professor in the Department of Food Science & Technology, JKUAT, in 2007. Prof. Ojijo was the Chairman, Performance Contracting Steering Committee during 2008/2009 and subsequently the inaugural Director, Directorate of Performance Contracting & Appraisal (DiPCA), JKUAT, charged with overseeing and implementing the JKUAT's performance-based management strategy. Prof. Ojijo has also been actively involved in village-level value added processing and handling of irrigated African leafy vegetables with rural farmer groups in Rongo District, Nyanza Province, Kenya, for food security and poverty alleviation. He has also been engaged in a research project on exploitation of sweet sorghum in the production of bio-industrial products. Prof. Ojijo has been Acting Director, Directorate of Academic Quality Assurance, and Acting Chairman of Department, Department of Food Science & Technology, JKUAT. He is also the current patron of Rongo Constituency University Students Association (ROCUSA), JKUAT Chapter, a board member of various high schools in Rongo Constituency, a mentor for youth groups in Embakasi Constituency, and a church elder of Mwangaza SDA Church, Nairobi. Prof. Ojijo was recently (from 1<sup>st</sup> November 2009) appointed to the continental role of Program Officer, SCARDA (Strengthening Capacity for Agricultural Research and Development in Africa), with the Forum for Agricultural Research in Africa (FARA) based in Accra, Ghana.

## **DETAILED BIODATA**

**Names** OJJO, NELSON KENNEDY OLANG'O  
**Date of birth** 21<sup>st</sup> November 1964  
**Nationality** Kenyan  
**Marital status** Married with three children  
**Languages** English – Proficient in spoken, written & technical  
Kiswahili – Proficient in spoken and written  
Japanese – Functional in spoken and written

### **Current Work Address**

Forum for Agricultural Research in Africa (FARA), 12 Anmeda Street, Roman Ridge, PMB CT 173, Cantonments, Accra, Ghana. Tel. (Office) +233-21-772823/779421; Mobile: +233-54-3030346; Fax: +233-21-773676; E-mail: [nojjo@fara-africa.org](mailto:nojjo@fara-africa.org)

### **Academic Address**

Department of Food Science and Technology, Jomo Kenyatta University of Agriculture and Technology (JKUAT), P.O. Box 62000, 00200, Nairobi, Kenya. Tel. (Office) +254-67-52711, 52255; Fax: +254-67-52164, Mobile: +254-720-692381. E-mail: [ojjonko@agr.jkuat.ac.ke](mailto:ojjonko@agr.jkuat.ac.ke)

### **Private Address**

P. O. Box 47689, 00100, Nairobi, Kenya, Tel. +254-720-692381; E-mail: [ojjonko@yahoo.com](mailto:ojjonko@yahoo.com)

### **Academic background**

- ⇒ UNESCO Post-doctoral Research Fellow – in Food Engineering at the Department of Biotechnology & Food Engineering, **TECHNION – ISRAEL INSTITUTE OF TECHNOLOGY**, Haifa 32000, **ISRAEL**. 2002 – 2004. (The research theme was rheological, microstructural, and thermal characterization of self-assembling systems, particularly vegetable oil-monoglyceride organogels)
- ⇒ Doctor of Philosophy (Ph.D. degree) – in Agricultural Science (Food Rheology) from **UNIVERSITY OF TSUKUBA**, Tsukuba City, Tennodai 1-1-1, 305, Ibaraki, **JAPAN**. 1996 – 2000. (Doctoral Dissertation was entitled “Studies on the Hard-to-Cook Defect in Soybean Cotyledons: A Kinetic and Rheological Perspective”)
- ⇒ Master of Science (M.Sc. degree) – in Food Technology from the **UNIVERSITY OF NAIROBI**, P. O. Box 30197, Nairobi, **KENYA**. 1988 – 1991. (Title of Master’s Thesis was “Objective Evaluation of Quality Changes in Stored Sweet Potato Roots”)
- ⇒ Bachelor of Science (B.Sc. Hons. degree) – in Food Science & Technology from the **UNIVERSITY OF NAIROBI**, P. O. Box 30197, Nairobi, **KENYA**. 1984 – 1987. *Best student in class*.
- ⇒ Kenya Advanced Certificate of Education (KACE) certificate, 3 Principal passes (Physics, Chemistry, Biology & Subsidiary Mathematics), **MANG’U HIGH SCHOOL**, Thika, **KENYA**, 1981 – 1982. *Best student in class*.

### **Some professional/administrative courses attended**

- ⇒ Magnetic Resonance Spectroscopy and Imaging Course – a two-week course conducted by the Department of Chemistry, University of Nairobi, Chiromo Campus, Nairobi, Kenya. April, 2002. Awarded a certificate of attendance.
- ⇒ E-Learning Course on KEWL-NEXTGEN software for E-Learning. Conducted by ICSIT, JKUAT, from 12<sup>th</sup> to 14<sup>th</sup> July 2006 at Jomo Kenyatta University of Agriculture & Technology.
- ⇒ Coffee Q-graders Course for specialty coffee quality grading conducted by The Coffee Quality Institute of USA at The Coffee Board of Kenya, Liquoring Department. September & November, 2007. Graduated as Coffee Star Cupper and Q-Grader.
- ⇒ Performance Contracting for State Corporations, conducted by Government Training Institute, in 2006
- ⇒ Performance Management, conducted by the Public Sector Reforms & Performance Contracting, Office of the Prime Minister, Government of Kenya, from 19<sup>th</sup> to 21<sup>st</sup> March 2009.

- ⇒ Effective Teaching, conducted by a pedagogy consultant on 8<sup>th</sup> October 2008 at AICAD Headquarters, Juja.

### **Previous engagements and employment**

- ⇒ *Director*, Directorate of Performance Contracting & Appraisal, Jomo Kenyatta University of Agriculture & Technology, 2008 - 2009
- ⇒ *Senior Lecturer*, Department of Food Science & Technology, Jomo Kenyatta University of Agriculture & Technology, 2002 – 2007.
- ⇒ *UNESCO Postdoctoral Fellow* at the Department of Food Engineering & Biotechnology, Technion – Israel Institute of Technology, Israel, from August 2002 – August 2004.
- ⇒ *Lecturer*, Department of Food Science & Technology, Jomo Kenyatta University of Agriculture & Technology, 1995 – 2002
- ⇒ *Visiting Lecturer* at the Department of Food Science & Technology, University of Namibia, Namibia, from June – August, 2002.
- ⇒ *Teaching Assistant* at the University of Tsukuba, Institute of Agricultural & Forestry Engineering, Departments of Biosystems Engineering Studies and Agricultural Sciences, Tsukuba City, Japan. 1997/1998.
- ⇒ *Part-time Lecturer* at the University of Nairobi, Department of Food Technology and Nutrition, 2<sup>nd</sup> Semester, 1995.
- ⇒ *Part-time Lecturer* at Jomo Kenyatta University of Agriculture and Technology, Department of Food Science and Postharvest Technology, 2<sup>nd</sup> Semester, 1994.
- ⇒ *Research Officer (Coffee Quality Technologist)* with Coffee Research Foundation, from 1991- 1995.
- ⇒ *Graduate Research Assistant* at the Department of Food Technology and Nutrition, University of Nairobi, from 1987 - 1988.
- ⇒ *Industrial attachment* at Unilever East Africa Industries, Nairobi, from June – September 1986.
- ⇒ *Faculty representative* to the University of Nairobi's students' organization, 1984 – 1987.
- ⇒ *Pre-university National Youth Training and Service* June – September 1983.

### **Current employment**

- ⇒ Program Officer, Strengthening Capacity for Agricultural Research & Development in Africa (SCARDA), Forum for Agricultural Research in Africa (FARA), Accra, Ghana.
- ⇒ *Associate Professor*, Department of Food Science and Postharvest Technology, Jomo Kenyatta University of Agriculture and Technology, Kenya, since April 2007.

### **Research interests**

- ⇒ Indigenous vegetables technology, rheology & texture of food systems; micro-emulsions and self-assembling systems; food hydrocolloids and starch systems; functional foods & nutraceuticals; sensory evaluation; exploitation of sweet sorghum in the production of bio-industrial products; fermented beverage technology, fat & oils technology, root & tuber crops technology, cereals and legumes technology, environmental aspects of food processing, sensory and consumer science, sugar processing technology.

### **Current Research Projects**

- ⇒ Sweet sorghum cultivation and processing
- ⇒ Basmati rice physic-chemical characterization
- ⇒ Value chain processing of African leafy vegetables for food security and poverty reduction
- ⇒ The use of vegetable oil – monoglyceride organogels in formulating heart-healthy shortenings & edible spreads
- ⇒ Postharvest processing and value addition of root and tuber crops
- ⇒ Stability and sorption behavior of solar dried African leafy vegetables
- ⇒ Spray-drying of camel milk and yoghurt
- ⇒ Design and characterization of micro-emulsions for aqueous solubilization of lipophilic bioactive substances
- ⇒ The use of enzymes in bioremediation of coffee processing wastes and improving the cup quality of wet processed Arabica coffee
- ⇒ Design, testing, and construction of a 'ugalizer' – a semi-automated *ugali* (stiff porridge) making machine
- ⇒ Improvement of functional & nutraceutical properties of fermented thin porridges
- ⇒ Adoption of Quality Protein Maize in Kenya, in conjunction with Kenya Agricultural Research Institute, KARI, Kitale, Kenya.

### Teaching experience

- ⇒ 1995 – 1996: Statistical Quality Control, Sensory Evaluation, Beverage Technology, Sugars, Starch, & Confectionery Technology - undergraduate students.
- ⇒ 2000 – 2002: Sensory Evaluation, Packaging Technology, Food Engineering – undergraduate students; Physical Properties of Foods – postgraduate students.
- ⇒ 2005 – Present: Introduction to Food Science & Technology, Sensory Evaluation, Food Engineering, Food Packaging Technology – undergraduate students; Physical Properties of Foods – postgraduate students.
- ⇒ 2005 – 2006: Taught visiting 4<sup>th</sup> Year students from Kigali Institute of Science & Technology (KIST), Rwanda, Food Engineering Practical at the Department of Food Science & Technology, JKUAT.

### Research Supervision

1. M.Sc. Research, Antioxidants and antimicrobials in extracts of selected African leafy vegetables, being conducted by Mr. Elias Mibei, a student registered in the Department of Biochemistry, JKUAT. 2008 – 2009.
2. M.Sc Research – Extraction & utilization of Yellow Oleander (*Thevetia peruviana*) oil. Conducted by Mr. P. O. Odhiambo at JKUAT from 2002 – 2004.
3. M. Sc. Research – Physico-chemical characterization and food application potential of pumpkin (*Cucurbita* spp.) fruit and seed kernel flours. By Monica Fedha – being undertaken in the Department of Food Science & Technology, JKUAT.
4. M.Sc. Research – Effects of storage and processing on  $\beta$ -carotene content of mangoes. By Peninah Muoki – being undertaken in the Department of Food Science & Technology, JKUAT.
5. B. Sc. Research – supervised several undergraduate students.

### Scholarships, awards & grants

1. 1988 – 1991: University of Nairobi scholarship and partial grant from Government of Switzerland to pursue M. Sc. Degree at the Department of Food Technology and Nutrition, University of Nairobi, Kenya.
2. 1990: The International Potato Center, CIP, Region III, based in Nairobi.
3. 1996 – 2000: Ministry of Education and Culture, Monbusho, Government of Japan to pursue doctoral studies at University of Tsukuba, Japan.
4. 2002 – 2004: UNESCO and Israeli Government, Postdoctoral Research Fellowship tenable at The Technion – Israel Institute of Technology, Israel.
5. 2003: European Commission, travel grant to attend and present a paper at the FoodAfrica International Meeting in Yaounde, Cameroon, 5 – 9 May 2003.
6. 2004: Jomo Kenyatta University of Agriculture & Technology (JKUAT), travel grant to attend and present a paper at the 2<sup>nd</sup> Biennial African Food Science and Nutrition Conference, Nov. 28 – Dec. 1, 2004 in Addis Ababa, Ethiopia.
7. 2005: Jomo Kenyatta University of Agriculture & Technology (JKUAT), travel grant to attend and display a poster at the EFFoST Conference on Innovations in traditional Foods held at the Polytechnical University of Valencia, Spain, 25 – 28 October 2005.
8. 2008: Jomo Kenyatta University of Agriculture & Technology (JKUAT), travel grant to attend the 13<sup>th</sup> World Congress on Clinical Nutrition, held from 29<sup>th</sup> January – 2<sup>nd</sup> February, 2008, at Howard Johnson Hotel, Xalapa, Veracruz, Mexico.

### Research Funding

1. 1990: *The International Potato Center*, CIP, Region III, based in Nairobi. Literature acquisition and local survey on traditional utilization of sweet potatoes in Kenya.
2. 1988 - 1990: *The Government of Switzerland*. To conduct M. Sc. research on sweet potato composition and storage
3. 1996-2000: *Ministry of Education, Culture & Social Services, Japan*. To undertake a Ph.D. research on textural changes in stored soybeans at University of Tsukuba, Japan.

4. 2002 – 2004: *UNESCO/Israeli Government*. To undertake research on rheological and microstructural characterization of olive oil – monoglyceride organogels at the Technion, Israel.
5. 2003 – 2004: *Dr. Eger Olive Oil Products Co., Yokneam, Israel*. To undertake research on storage and rheological characteristics of olive oil – monoglyceride mixtures. US\$ 10,000
6. 2001 – 2003: *Agricultural Research Fund/KARI, Kenya*. To research on extraction and utilization of Yellow Oleander seed oil. KShs. 1.5 million
7. 2002 – 2007: *Jomo Kenyatta University of Agriculture & Technology (JKUAT)*. To conduct research on extraction and utilization of Yellow Oleander seed oil for edible and bioenergy purposes. KShs. 2.5 million
8. 2007: *Commission for Higher Education (CHE), Kenya*. To conduct research on value-chain processing of African leafy vegetables. KShs. 3 million
9. 2009: *Jomo Kenyatta University of Agriculture & Technology (JKUAT)*. To conduct research on agronomic adoption trials and postharvest processing of sweet sorghum. KShs. 4.5 million.
10. 2009: *Jomo Kenyatta University of Agriculture & Technology (JKUAT)*. To conduct research on physico-chemical and molecular characterization of Basmati rice lines for improved quality. 4.5 million.

#### **Past and current professional affiliations**

1. Professional member, International Society of Food Engineering (ISFE), 2009 - (Member No. 001188)
2. Professional member, Institute of Food Technologists (IFT, USA), 2001 – 2002 (lapsed due to non-payment of annual fees)
3. Student member, Institute of Food Technologists (IFT, USA), 1997 – 2000
4. Professional member, Kenya Institute of Food Science and Technology (KIFST).
5. Student member, Japanese Society of Food Science and Technology, 1998 - 2000
6. Student member, Japanese Society of Agricultural Structures, 1999 – 2000
7. Member, Coffee Quality Experts Association of Kenya. 1993 – Present.

#### **Participation in seminars, workshops, & conferences**

1. Data Perspectives Seminar on Management and Statistical Analysis of Research Data held at Milimani Hotel, Nairobi, 20 - 24 September, 1993.
2. Workshop on Coffee Promotion to the Japanese Market held at Hilton Hotel, Nairobi on March 8, 1994. This Workshop was organized by the Japanese External Trade Organization (JETRO).
3. Symposium on Coffee Pruning convened by Coffee Research Foundation (CRF) on February 18, 1993 at Coffee Research Station, Ruiru, Kenya.
4. Kenya Institute of Food Science & Technology (KIFST) Conference held in Nairobi. 1995 – 1996.
5. Japanese Society of Agricultural Structures, Annual Conference held at Utsunomiya University, Japan. 1997, 1999.
6. International Workshop on Applications of Magnetic Resonance and Other Spectroscopic Techniques to Food Science held at Himeji Institute of Technology, Harima Science Garden City, Japan, 15 – 17<sup>th</sup> September, 1997.
7. Japanese Society of Food Science & Technology, Annual Conference held at Hokkaido University, Japan, 31 July – 2 August, 1998.
8. Japanese Society of Agricultural Machinery, Annual Conference held at Yamagata University, Japan, 1 – 4 April, 1998.
9. FoodAfrica International Working Meeting Conference, Yaounde, Cameroon, 5 - 9 May, 2003.
10. International Conference on Engineering & Food (ICEF) 9, Montpellier, France, March 2004.
11. 2<sup>nd</sup> Biennial African Food Science & Nutrition Conference (FOSNNA), Addis Ababa, Ethiopia, Nov 28 – Dec 1, 2004.
12. African Brain Gain Conference, Nairobi, Kenya, 19 – 22 December 2004.
13. Export Processing Zone Authority (EPZA, Kenya) Workshop on Food Value Addition, March 3 – 4, 2005, at The Grand Regency Hotel, Nairobi, Kenya.
14. Coffee Quality Institute Cupping Seminar on assessment of specialty coffee quality, 21 – 24 June 2005, at Coffee Research Foundation, Coffee Training Institute, Ruiru, Kenya.
15. National Dissemination Workshop on Aflatoxins, 6 October 2005 at KEPHIS Headquarters in Karen, Nairobi, Kenya, organized by the Ministry of Health, Government of Kenya.

16. EFFoST INTRADFOOD 2005 Conference, 25 – 28 October, 2005 at the Polytechnical University, Valencia, Spain, organized by European Federation of Food Science & Technology (EFFoST) and Elsevier Science Publishers.
17. Jomo Kenyatta University of Agriculture & Technology (JKUAT), 2006 Scientific, Technological, and Industrial Conference held at JKUAT from 26<sup>th</sup> – 27<sup>th</sup> October, 2006.
18. 13<sup>th</sup> World Congress on Clinical Nutrition, held from 29<sup>th</sup> January – 2<sup>nd</sup> February, 2008, at Howard Johnson Hotel, Xalapa, Veracruz, Mexico.
19. 1<sup>st</sup> National Conference and Exhibition for Dissemination of Research Results and Review of Innovations held at the Kenyatta International Conference Center, Nairobi, from 28 – 30 April 2008. Ministry of Higher Education, Science & Technology, Republic of Kenya.
20. COPENMIND, Clean Technology Exhibition in Copenhagen, Denmark, 1<sup>st</sup> – 4<sup>th</sup> September 2008.
21. Research and Innovation Management Tool Workshop, held at JKUAT on 29<sup>th</sup> April 2009.

### Consultancy

1. Course facilitator (on aspects of coffee bean processing and quality) during the World Bank funded Small Coffee Improvement Program courses for coffee factory managers and technicians at Coffee Research Foundation in 1993.
2. Course facilitator on experimental designs & data analysis during the Jomo Kenyatta University of Agriculture and Technology (JKUAT)/ Japan International Cooperation Agency (JICA) sponsored 3<sup>rd</sup> Country Regional Training on Applied Food Analysis for participants from East, Central, and Southern Africa, in 1995, 2001 - 2002.
3. In-house training on Sensory Evaluation at Unga Foods Limited, Kenya, Quality Assurance Department, 2001.
4. Organizer and main facilitator at the sensory evaluation seminars organized by Sensotech Consultants Limited (Kenya) in collaboration with Total Quality Training Consultants (Kenya), 2001 – 2002.
5. World Bank-Kenya Industrial Research & Development Organization (KIRDI) sponsored course conducted in the Department of Food Science & Technology, JKUAT, for small-scale food processors. Taught the participants packaging technology. 2002.
6. Storage stability of olive oil-monoglyceride organogels, contract research conducted for Dr. Eger Olive Oil Products Ltd., at the Department of Food Biotechnology & Engineering, The Technion, Israel, 2002 – 2003.
7. Facilitator on Food Packaging at the African Institute for Capacity Development (AICAD) – sponsored 2<sup>nd</sup> In-Country Training on Value-added Food Processing for small-scale food processors, August 2006.
8. Facilitator on Food Packaging at the African Institute for Capacity Development (AICAD) – sponsored 3<sup>rd</sup> In-Country Training on Value-added Food Processing for small-scale food processors, September 2008.
9. Facilitator on Food Packaging at the African Institute for Capacity Development (AICAD) – sponsored 3<sup>rd</sup> In-Country Training on Value-added Food Processing for small-scale food processors, August 2009.
10. Facilitator on Post-harvest Technology of African Leafy Vegetables (ALVs) during the Training of Trainers seminar for Rongo Constituency Women Groups at the DO's Office in Rongo District Headquarters. 20 – 26 May 2008.
11. Extraction and characterization of barley grass extracts, research consultancy conducted for Joskear International Ltd, Nairobi. August, 2008.
12. Course Facilitator, Research & Innovation Management Tool Workshop held on 29<sup>th</sup> April 2009 at JKUAT on the topic: "Project Management using Microsoft Project™"

### Papers published in refereed journals

1. Muoki, P. N., Makokha, A. O., Onyango, C. A. and **Ojijo, N. K. O.** (2009). Potential contribution of mangoes to reduction of vitamin A deficiency in Kenya. *Ecology of Food and Nutrition*, Vol. 48(6): 482 – 498.
2. **Ojijo, N. K. O.** and Shimoni, E. (2008). Minimization of cassava paste flow properties using the 'Farris effect'. *Lebensmittel Wissenschaft und Technologie*, 41: 51 – 57.
3. **Ojijo, N. K. O.** and Shimoni, E. (2007). Influence of xanthan gum and tapioca starch on the retrogradation and gelation of finger millet (*Eleusine coracana* (L.) Gaertner) starch pastes. *Journal of Texture Studies*, Vol. 38: 100 – 115.

4. **Ojijo, N. K. O.**, Neeman, I., Eger, I. and Shimoni, E. (2004). Effects of monoglyceride content, cooling rate, and shear on the rheological properties of olive oil/monoglyceride gel networks. *Journal of the Science of Food & Agriculture*, Vol. 84(12): 1585 - 1593.
5. **Ojijo, N. K. O.** and Shimoni, E. (2004). Rheological properties of fermented finger millet (*Eleusine coracana*) thin porridge. *Carbohydrate Polymers*, Vol. 56(2,4): 235 - 242.
6. **Ojijo, N. K. O.**, Kesselman, E., Shuster, V., Eichler, S., Eger, S., Neeman, I., and Shimoni, E. (2004). Changes in microstructural, thermal, and rheological properties of olive oil/monoglyceride networks during storage. *Food Research International*, Vol. 37(4): 385 – 393.
7. Shimizu, N., Kimura, T. and **Ojijo, N. K. O.** Development of rice quality evaluation technique based on physical properties of cooked rice: Rice quality related to rice stickiness during cooking on the Excess Water Cooking Method. *Journal of the Japanese Society of Agricultural Machinery*, Vol. 62(2): 94 -100. 2000
8. **Ojijo, N. K. O.**, Kimura, T., Shimizu, N. and Koaze, H. Viscoelastic components of hard-to-cook defect in soybean cotyledons subjected to accelerated storage and salt soaking. *Journal of the Society of Agricultural Structures, Japan*, Vol. 30(4): 61-72. 2000
9. **Ojijo, N. K. O.**, Kimura, T., Shimizu, N. and Koaze, H. Characterization of textural and chemical changes in soybean cotyledons subjected to accelerated storage and salt soaking. *Journal of the Society of Agricultural Structures, Japan*, Vol.30 (4): 31-42. 2000
10. **Ojijo, N. K. O.**, Kimura, T. and Kaoze, H. Composition, soaking and softening characteristics of some Kenyan beans (*Phaseolus vulgaris* L.). *Food Science and Technology Research*, Vol.6 (1): 12 – 18. 2000 (Japan).
11. **Ojijo, N. K. O.** The occurrence of off-flavors in Kenya coffee: An exploratory study. *Kenya Coffee*, Vol. 58: 1677 - 1684. 1993.
12. Karuri, E. G. and **Ojijo, N. K. O.** Storage studies on sweet potato roots: Experiences with KSP 20 cultivar. *Acta Horticulturae* (Postharvest 93), 368: 441 - 452. 1994.

#### Papers in refereed proceedings

1. **Ojijo, N. K. O.**, Orina, I. N., Karanja, P. N., and Mwasaru, M. A. (2006). Vegetable oil organogels as possible substitutes for conventional shortenings. In Proceedings of the Jomo Kenyatta University of Agriculture and Technology (JKUAT) 2006 Scientific, Technological, and Industrialization Conference held at JKUAT from 26<sup>th</sup> – 27<sup>th</sup> October, 2006. pp. 262 – 271.
2. **Ojijo, N. K. O.** and E. Shimoni, Retrogradation and gelation properties of aqueous finger millet starch pastes mixed with xanthan gum or tapioca starch. In Proceedings of the 2<sup>nd</sup> Biennial Food Science and Nutrition Conference for Africa in Addis Ababa, Ethiopia, from 28<sup>th</sup> Nov –1<sup>st</sup> Dec 2004.
3. **Ojijo, N. K. O.** and E. Shimoni, Effect of hydrocolloids on storage properties of fermented finger millet uji. In Proceedings of the FoodAfrica International Working Meeting, Yaounde, Cameroon, 5 – 9 May, 2003. <http://foodafrica.nri.org/conference/workshop.html>
4. **Ojijo, N. K. O.** Analysis of cup quality of Kenya Arabica coffee cultivars (Ruiru 11, SL 28 and SL 34) using the Extended Triangle Test. In Proceedings of the 2<sup>nd</sup> KIFST conference, Nairobi, Kenya, July, 1995
5. **Ojijo, N. K. O.** Applicability of parametric statistics to liquoring data derived from the Coffee Classification Report. In Proceedings of the 2<sup>nd</sup> KIFST Conference, Nairobi, Kenya, July, 1995.
6. **Ojijo, N. K. O.** and Karuri, E. G. Cooking characteristics of three sweet potato cultivars commonly grown in Kenya. In: *Proceedings of the Symposium on Root and Tuber Crops for Africa, held at IITA, Nigeria*. (Eds: G. J. Scott, P. I. Ferguson and J. E. Herrera). IITA and CIP. Pp. 367 - 372.1993.

#### Review papers in refereed journals

1. **Ojijo, N. K. O.** Some common aroma notes of coffee and their chemical origins or associated substances: A review. *Kenya Coffee*, Vol. 58: 1659 - 1663. 1993.

#### Papers accepted for publication

1. **Ojijo, N. K. O.** (2009). African fermented thin porridges: A technological and functional perspective. A review paper submitted to *Journal of Agriculture, Science & Technology*, accepted, 2009.

### Papers read at conferences, workshops & meetings.

1. **Ojijo, N. K. O.** Analysis of cup quality of Kenya Arabica coffee cultivars (Ruiru 11, SL 28 and SL 34) using the Extended Triangle Test. KIFST conference, Nairobi, Kenya, July, 1995.
2. **Ojijo, N. K. O.** Applicability of parametric statistics to liquoring data derived from the Coffee Classification Report. KIFST conference, Nairobi, Kenya, July, 1995.
3. **Ojijo, N. K. O.**, Kimura, T. and Koaze, H. Storage and marketing of pulses/legumes in Kenya. Japanese Society of Agricultural Structures Conference held at Tokyo Agricultural University, Japan, 5 – 6<sup>th</sup> August, 1997.
4. **Ojijo, N. K. O.**, and Kimura, T. Possibility of using instrumental hardness index to gauge molecular changes during cooking of soybeans. Japanese Society of Agricultural Machinery Conference held at Yamagata University, Japan, 1 – 4<sup>th</sup> April, 1998.
5. **Ojijo, N. K. O.** and Kimura, T. Viscoelastic characterization of soybean cotyledons: Influence of test conditions and soaking regimes. Japanese Society of Food Science and Technology Conference held at Hokkaido University, Japan, from 31<sup>st</sup> July – 2<sup>nd</sup> August, 1998.
6. **Ojijo, N. K. O.** and Kimura, T. Characterization of textural changes in soybean cotyledons subjected to accelerated storage. Japanese Society of Agricultural Structures Conference held at Utsunomiya University, Japan, 5 – 6<sup>th</sup> August, 1999.
7. **Ojijo, N. K. O.** and Shimoni, E. Effects of hydrocolloids and cassava flour on storage stability of uji, an East African thin porridge. Oral presentation at the FoodAfrica International Working Meeting, Yaounde, Cameroon, 5 – 9<sup>th</sup> May 2003.
8. **Ojijo, N. K. O.**, Neeman, I., Eger, S., and Shimoni, E. Dynamic and quasi-static rheological characteristics of olive oil-monoglyceride aggregate structures. International Conference on engineering and Foods (ICEF)9, Montpellier, France, March 2004.
9. **Ojijo, N. K. O.**, Kesselman, E., Shuster, V., Eichler, S., Neeman, I., Eger, S., and Shimoni, E. Microstructural, thermal and crystallization characteristics of olive oil-monoglyceride mixtures. ICEF9, Montpellier, France, March 2004.
10. **Ojijo, N. K. O.** and E. Shimoni. Retrogradation and gelation properties of aqueous finger millet starch pastes mixed with xanthan gum or tapioca starch. 2<sup>nd</sup> Biennial African Food Science and Nutrition Conference held in Addis Ababa, Ethiopia, from November 28 – December 1, 2004. FOSNNA and EHNRI, Ethiopia.
11. **Ojijo, N. K. O.** 'Soybean processing and utilization for improving the health and nutrition of rural households living with HIV/AIDS: state of the art knowledge, research strategy, and implementation'. Presented to a research panel at the Tropical Soil Biology Fertility Institute (TSBF), CIAT, Nairobi, Kenya. 2005.
12. **Ojijo, N. K. O.** "Perspectives on the technology and functionality of African traditional thin porridges". European Forum for Food Science & Technology (EFFoST 2005) Conference, Valencia, Spain, 2005.
13. **Ojijo, N. K. O.**, Orina, I. N., Karanja, P. N. and Mwasaru, A. M. (2006). Physico-chemical and shortening characteristics of corn oil – monoglyceride organogels. JKUAT Conference, 26 – 27 October, 2006.
14. **Ojijo, N. K. O.** Application of molecular self-assembly in the production of non-atherogenic plastic fat shortenings. 1<sup>st</sup> National Conference and Exhibition for Dissemination of Research Results and Review of Innovations held at the Kenyatta International Conference Center, Nairobi, from 28 – 30 April 2008. Ministry of Higher Education, Science & Technology, Republic of Kenya
15. Mibei, E. K., **Ojijo, N. K. O.**, Karanja, S. R., Kinyua, J. and Rukunga, G. Phytochemical and anti-oxidant compositional attributes of some selected indigenous African leafy vegetables in Kenya (2009). 5<sup>th</sup> Annual International Conference, Moi University on "Research and Knowledge Dissemination towards the Building of Healthy and Socio-Economically Stable Nations, held at Moi University, Eldoret, Kenya, from 4<sup>th</sup> August – 8<sup>th</sup> August, 2009.

### Posters mounted at international conferences

1. **Ojijo, N. K. O.** Perspectives on the quality and functional properties of African traditional thin porridges. EFFoST INTRADFOOD 2005 – Innovations in Traditional Foods, 25 – 28 October 2005, Polytechnical University, Valencia, Spain. European Federation of Food Science and Technology (EFFoST) and Elsevier Science Publishers Ltd.
2. **Ojijo, N. K. O.** and E. Shimoni (2008). Improving the energy density of cassava-based thin porridges for complimentary feeding using the 'Farris effect'. 13<sup>th</sup> World Congress on Clinical Nutrition, 29 January – 2

February, 2008, Howard Johnson Hotel, Xalapa, Veracruz, Mexico. Organized by the International College of Nutrition and University of Veracruz, Mexico.

#### Invited papers at workshops/conferences

1. **Ojjo, N. K. O.** Training, Research & Development: Universities and the Food Value Addition Industries in Kenya. Export Processing Zone Authority (EPZA) Workshop on Food Value Addition, March 3 – 4, 2005, Nairobi, Kenya ([www.epzakenya.com](http://www.epzakenya.com)).

#### Completed theses

1. Objective Evaluation of Quality Changes in Stored Sweet Potato Roots. **M. Sc. Thesis**. Completed in the Department of Food Technology and Nutrition, University of Nairobi, Kenya, 1991.
2. Studies on the Hard-to-cook Defect in Soybean Cotyledons – A Kinetic and Rheological Perspective. **Ph. D. Dissertation**. Completed in the Department of Agricultural Sciences, Food Engineering Laboratory, University of Tsukuba, Japan, 1999.

#### Edited publications & editorial responsibilities

1. Mathooko, F. M., **Ojjo, N.K.O.**, Mwasaru, M.A., Kenji, G.M., Kiiyukia, C. and Njoroge, S.M. (Eds.) (2002). *Training Manual for the Tenth Regional Group Training in Applied Food Analysis*.
2. Mathooko, F. M., Onyango, C.A., Njoroge, S.M., Mwasaru, M.A., Kenji, G.M., Kiiyukia, C. and **Ojjo, N.K.O.** (Eds.) (2001). *Training Manual for the Ninth Regional Group Training in Applied Food Analysis*. ISBN 9966 – 26 – 8.
3. **Ojjo, N.K.O.**, F.M. Mathooko, H. Koaze and L.E. Wongo. (Eds.) (1995). *Proceedings of the First Kenya Institute of Food Science and Technology Conference*. ISBN 9966-923-36-5.
4. Muhoho, S. M., **Ojjo, N. K. O.**, Onyango, A. N. and Tunje, T. K. (2006). *Laboratory Practicals in Food Science & Technology*. Department of Food Science & Technology, Jomo Kenyatta University of Agriculture & Technology, Kenya.
5. Co-editor, Proceedings of the Kenya Institute of Food Science & Technology (KIFST), 1995 – 1996.
6. Editorial Committee Member, Coffee Research Foundation Newsletter, 1994 – 1995.
7. Editorial Member, Proceedings of the FoodAfrica International Working Meeting held in Yaounde, Cameroon from 5 – 9 May 2003.

#### Thesis examination

1. *Internal Examiner* for “Technological approaches for enhancing utilization of sorghums and millets in Kenya”. M.Sc. Thesis by Simon Ochanda, Department of Food Science & Technology, JKUAT, 2009.
2. *Internal Examiner* for ‘Aluminium and fluoride levels in soil, water and foods in Mwingi and Thika Districts and their implications on human health’. M.Sc. Thesis by Joy Kagwiria Ochieng, Department of Food Science & Technology, JKUAT, 2007.
3. *Examiner’s Board Member* for ‘Evaluation of  $\beta$ -Carotene and total carotenoids in selected mango (*Mangifera indica*) varieties and products consumed in Kenya’. M. Sc. Thesis by Penina Ngusye Muoki, Department of Food Science & Technology, JKUAT, 2008.
4. *External examiner* for Mr. George Ooko’s M.Sc. thesis entitled, “Evaluation of selected potato varieties and advanced clones for processing into French fries”, Submitted to the Department of Food Technology & Nutrition, University of Nairobi, Kenya, 2008.
5. *Examiner’s Board Member* for ‘Physico-chemical characterization and food application potential of pumpkin (*Cucurbita* spp) fruit and seed kernel flours’. M.Sc. thesis by Fedha Monica Salano, 2007.

#### Peer journal review

1. Reviewer, *Journal of Agriculture, Science & Technology* (JKUAT)
2. Reviewer, *African Journal of Biotechnology*.
3. Reviewer, *Food & Bioprocess Technology: An International Journal* (UK)

#### Previous and current committee memberships and responsibilities

1. Member, Strategic Plan Review Committee, JKUAT, 2009
2. Acting Director, Directorate of Academic Quality Assurance, JKUAT, April, 2009

3. Acting Chairman, Department of Food Science & Technology, JKUAT, July, 2008.
4. Chairman, Research, Publications & Seminars Committee, Department of Food Science & Technology, JKUAT, Kenya. 2006 – Present.
5. Member, Department of Food Science & Technology, Staff Evaluation Committee, 2007 – Present.
6. Member, Postgraduate Committee, Faculty of Agriculture, JKUAT. 2008 -
7. Alternate Member, Commission for Higher Education (CHE), Inter University Credit Accumulation and Transfer (CAT), Agriculture Subcommittee, 2007 –
8. Team Leader, JKUAT Undergraduate Students' Attachment Follow-up Team for Central & Eastern Province. 2007 -
9. Member, Ph.D. Pre-selection Committee, German Academic Exchange Service (DAAD) Scholarships for Kenyan Students. 2004 – Present.
10. Departmental Student Representative, 1984 – 1987, Department of Food Technology & Nutrition, College of Agriculture & Veterinary Sciences, University of Nairobi, P. O. Box 30197, Nairobi.
11. Member, Kenya Bureau of Standards' Technical Sub-committee on Coffee Standards (1992 – 1995). This Sub-committee was concerned with the elaboration of local standards on green coffee in collaboration with International Coffee Organization (ICO) and International Organization for Standardization (ISO).
12. Member, Editorial Committee, Coffee Research Foundation Newsletter, 1994 - 1995.
13. Editor, Proceedings of Kenya Institute of Food Science & Technology (KIFST) Conference, 1995/96.
14. Head, Coffee Bean Quality Unit, Coffee Research Foundation, 1991 - 1995.
15. Member, Kenya Bureau of Standards (KBS), Technical Sub-committee on Sensory Evaluation, 2000 -
16. Managing Consultant, Sensotech Consultants Limited, P. O. Box 70376, Nairobi, Kenya. A sensory evaluation consultancy firm involved in promotion of scientific sensory evaluation techniques to the local Kenyan food processing industry, 2001 - .
17. Director, Estaro Academy, Migori District, Kenya
18. Member, Development Committee, Kwoyo Kodalo Secondary School, Rongo District, 2005 – Present.
19. Member, Board of Governors, Kanyasrega Nyokal Secondary School, Rongo District, 2008 – Present.
20. Member, JKUAT Consultative Committee on Knowledge-based Economic Growth and Industrialization, 2005 - Present.
21. Church Elder, Mwangaza Seventh-Day Adventist Church, Nairobi. 2008 - 2009

### Hobbies

1. Reading, particularly The Holy Bible.
2. Travelling & listening to gospel music
3. Coffee tasting

### Referees

1. Prof. Mabel Imbuga, Vice-Chancellor, Jomo Kenyatta University of Agriculture & Technology, P.O. Box 62000, 00200, Nairobi, Kenya. Tel: +254-06752711, Fax: +254-06752164. *E-mail:* [vc@jkuat.ac.ke](mailto:vc@jkuat.ac.ke).
2. Prof. Eyal Shimoni, Department of Biotechnology & Food Engineering, The Technion – Israel Institute of Technology, Haifa 32000, Israel. *E-mail:* [eshimoni@tx.technion.ac.il](mailto:eshimoni@tx.technion.ac.il).
3. Dr. Suleman Oketch, Registrar, Academic Affairs (AA), JKUAT, P. O. Box 62000, 00200, Nairobi, Kenya, (Office) +254-67-52711. *E-mail:* [s.oketch@aa.jkuat.ac.ke](mailto:s.oketch@aa.jkuat.ac.ke)
4. Dr. Shaul Eger, Dr. Eger Olive Oil Products Ltd., Yokneam Moshava 20600, Israel. Tel. +972-4-9893477, Fax: +972-4-9891496, *E-mail:* [egerfarm@netvision.net.il](mailto:egerfarm@netvision.net.il).
5. Prof. Hiroshi Koaze, Laboratory of Food Technology, School of Agriculture & Veterinary Medicine, Inada, Obihiro, Hokkaido, Japan, 080-8555. Tel/Fax: +81-155-49-5570. *E-mail:* [koaze@obihiro.ac.jp](mailto:koaze@obihiro.ac.jp)