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#### **PERSONAL INFORMATION**

SURNAME	Mutuli
OTHER NAMES	Daniel Amedi
DATE OF BIRTH	3 <sup>rd</sup> December 1956
MARITAL STATUS	Married
NATIONALITY	Kenyan
SPECIALITY	Mechanization, Process and Environmental Engineer

#### **EDUCATIONAL BACKGROUND**

1964 –1970	<b>Buxton Primary School</b> <b>(now known as Ronald Ngala Primary School) in Mombasa</b> Certificate of Primary Education (CPE) – 35 points
1971 – 1976	<b>Alliance High School, Kikuyu</b> East African Certificate of Education (EACE) – Div 1 in 1974  East African Advanced Certificate of Education (EAACE) 3 Principles in 1976

- 1976 – 1980                    **University of Nairobi, Nairobi**  
Bachelor of Science in Agricultural Engineering  
Second Class Honours, Upper Division
- 1986 – 1988                    **University of Newcastle Upon Tyne,  
Newcastle Upon Tyne, England**  
Master of Philosophy in Thermo Fluids Engineering

### **PROFESSIONAL QUALIFICATIONS**

- 1981                                Graduate Member of the Institution of Engineers of Kenya
- 1981                                Registered Graduate Engineer with the Engineers Registered Board.
- 1981                                Member of the Kenya Society of Agricultural Engineers
- 1990                                Member of the Institution of Agricultural Engineers, England
- 1996                                Chartered Engineer, Engineering Council, United Kingdom
- 1998                                Registered Engineer, Engineers Registration Board, Kenya

### **EMPLOYMENT RECORD**

- 1999 to date                    **Senior Lecturer, Department of Agricultural Engineering,  
University of Nairobi, Kenya**
- 1988 - 1999                    **Lecturer, Department of Agricultural Engineering,  
University of Nairobi, Kenya**
- 1985 - 1988                    **Project Agricultural Engineer**  
Project Management Unit of the Small holder Coffee  
Improvement Project (SCIP) – a project co-financed by the  
Government of Kenya, Commonwealth Development Corporation  
and the World Bank (IDA).
- 1981 - 1985                    **Provincial Coffee Factory Engineer**  
Eastern Province – Still the Ministry of Agriculture
- 1980 - 1981                    **Agricultural Mechanization Engineer**  
Agricultural Mechanization Station, Mariakani, an officer of the  
Ministry of Agriculture
- 1979                                **Assistant Silo Manager**  
Nakuru Silos of the National Cereals & Produce Board of Kenya

## KEY QUALIFICATIONS

Eng. Daniel A. Mutuli has B.Sc and M.Phil degrees from the University of Nairobi and the University of Newcastle-Upon-Tyne (England) respectively. He is registered engineer by the Engineers Registration Board of Kenya (ERB), and is a member of the Institution of Engineers of Kenya. (IEK), the Institution of Agricultural Engineers (IagrEng, Britain), and the Kenya Society of Agricultural Engineers (KSAE).

Eng. Mutuli has a consultancy experience in Kenya and Malawi in sugarcane production, environmental engineering, agro-industries and agricultural mechanization. He has undertaken technical audit including South Nyanza Sugar Company Ltd, Miwani Sugar Company (1989) Ltd, Ethiopian Privatisation Agency, Coffee Plantation and Development Enterprise (CPDE), Plys and Panes Ltd, Kenya Tea Development Authority (KTDA) and the Kenya Cooperative Creameries (KCC).

He has also participated in impact assessment consultancy assignments including competitiveness, investment opportunities and risks under liberalized trade in East Africa Project, Case Studies of Agribusiness Firms in Kenya, Uganda and Tanzania for Associates in Rural Development (ARD), Technoserve Inc, collation of information and production of a report on the indigenous foods in East, Central and Southern Africa (CRHCS\_ECSA), baseline survey consultancy on the conservation of resources through enterprise (CORE) for the African Wildlife Foundation (AWF), and final evaluation of Morulem Irrigation Scheme for the World Vision International.

Eng. Mutuli has had research and teaching experience at the University of Nairobi where he has taught environmental health and safety engineering, process engineering, mechanization, and technology in society. He has had research experience in sugarcane production, drying of crops, oils processing, tractor mechanics, and operations research. Mr. Mutuli has also worked as an assistant silo manager with the National Cereals and Produce Board (NCPB), agricultural mechanization engineer with the Ministry of Agriculture, and as coordinator and processing and rural technology unit of the Ministry of Agriculture.

## CONSULTANCY EXPERIENCE:

- **International Fund for Agricultural Development (IFAD): Engineering Consultant;** Supervision Mission Report for Special Country Programme – Phase II (SCPII), UNOPS PROJECT ETH/99/F01. May 2003
- **African Wildlife Foundation: Dec 2001 to Oct. 2002.** Baseline Survey Consultancy on the Conservation of Resources Through Enterprise (CORE) including background study research, questionnaire design, field testing of questionnaires, review of questionnaires, field survey, data analysis, report writing and presentation. A total of 167 questionnaires with 1,400 variables were analysed.
- **Commonwealth Regional Health Community Secretariat for East, Central and Southern Africa (CRHCS-ECSA): Dec 2001 to July 2002.** Collation of information and production of a report of the Indigenous foods in East, Central and Southern Africa including identification of indigenous foods, review of climatic and soil requirements and

potential for commercial production of indigenous foods and their role in human health, consumption and utilization of indigenous foods at household and other levels, processing, preservation and marketing strategies and review of the indigenous foods project.

- **South Nyanza Sugar Company Limited. Cooperative Merchant Bank: June 2002.** Valuation of Plant and Machinery as part of the Financial Restructuring Project.
- **South Nyanza Sugar Company Limited. Cooperative Merchant Bank: June 2001 to June 2002.** Technical Evaluation and Assessment of plant and machinery including factory operations, agricultural machinery and transport, nucleus estates, outgrowers estates and extension, electrical installations, maintenance, environmental health considerations, buildings and external structures, technology, occupational health and safety, business options, technical management and training and development of project implementation frame work for rehabilitation with **Cooperative Merchant Bank.**
- **World Vision Kenya. Final Evaluation of Morulem Irrigation Project. July 2001.** Technical evaluation: evaluation of appropriateness, sustainability and quality of irrigation infrastructure, environmental components and analysis of costs and benefits of the project.
- **Special Country Project Phase II, International Funds for Agricultural Development (IFAD) (UNOPS PROJECT ETH/99/F01) July 2001 – October 2001.** "Training of Engineers and Agronomists as Implementers of the Special Country Project Phase II at Agricultural Finance Corporation Training College, Nairobi, Kenya.
- **Associates in Rural Development. Technoserve Inc. USAID: Dec 2000 to June 2001.** Competitiveness, Investment Opportunities and Risks under Liberalized Trade in East Africa: Case Studies of Agribusiness Firms in Kenya; Uganda and Tanzania. Specific tasks performed included; assessment of production and capacity utilization of the selected firms, level of information technology and instrumentation, availability and reliability of energy and utilities especially electricity in production processes, supply of raw materials, determination and critical evaluation of competitiveness and selected firms, comparative analysis of the firms in order to determine the investment opportunities that are likely to arise through more liberalized access to a wider regional market and assessment of how public policies influence the growth of agribusiness sector in Kenya, Uganda and Tanzania.
- **Muhoroni Sugar Company (MUSCO). Kenya Sugar Authority (KSA): June-August 2000.** Technical Audit including valuation of processing plant and machinery, evaluation of factory operations, agricultural machinery, cane supply, transport, outgrowers estates, electrical installations. Maintenance, environmental issues, technical management and extension, information technology, recommendations for rehabilitation with **Miligan & Company Limited.**

- **Ethiopian Privatisation Agency – Tranche III. 2000.** Technical Audit with **Ernst & Young** including Assets Valuation in Freight and Transportation Enterprise, Construction Enterprise, Agricultural Services Enterprise and the Pharmaceutical Enterprise.
- **Ethiopian Privatisation Agency – Tranche II: May 1999 - Dec 2000.** Technical Audit with **Deloitte and Touche** of 49 coffee factories, 3 cereals plants and Oil Mills including machinery valuation, technical assessment, staff evaluation, proposal and designs and specifications for refurbishment and rehabilitation, environmental health and safety; agricultural machinery; electrical installations, factory operations, maintenance, technical management and human resources, building, technology; and financial issues.
- **Technoserve Inc: Nov 1999 – Feb 2000.** Impact Assessment of the USAID/REDSO/ESA's Regional Trade Analytic Agenda (RTAA): Impact assessment for Informal Cross Border Trade (ICBT) and Cost of Transportation (COT) projects in Kenya, Uganda, Tanzania, Malawi, Zambia and Mozambique. The assessment was achieved by visiting the project countries and discussions and interviews with stakeholders in trade and transport sectors and also carrying out desk reviews of the previous works on the projects. The resulting impacts were broadly categorized as: potential; direct; indirect; negative or positive.
- **Miwani Sugar Company (1989) Limited. Kenya Sugar Authority: 1999:** Technical Audit including valuation of processing plant and machinery, evaluation of factory operations, agricultural machinery, transport, nucleus estates, electrical installations, maintenance, environmental issues, technical management and extension, buildings, technology, laboratory equipment, water and sewerage systems, occupational health and safety, recommendations for rehabilitation, and development of implementable project framework with **Deloitte and Touche**.
- **South Nyanza Sugar Company limited (SONY SUGAR).** Bid evaluation of the Technical Management Contract of the South Nyanza Sugar Comoany Limited. Specific tasks performed included Analysis, Evaluation, Ranking, Assigning scores on the bid documents from the firms which quoted for Sonysugar Technical Management Contract (TMC), Presentation of the evaluation report to the Chairman, Sonysugar and defending it.
- **UNIDO CFC-FC/RAF/96/001.** Review of Past Research Results and Present Production Practices of Sisal (Country Report for Kenya). April 1988.
- **Government of Malawi, TAF/ADF Grant.** "Strengthening of Farm Mechanization in Malawi", Agricultural Sector Study Phase II. January 1997.
- **Government of Malawi, TAF/ADF Grant.** Agro-industrial and environmental engineer for "Review of Design and preparation of Tender Documents for the lower Shire Valley Irrigation Project". January 1997

- **Kenya Planters Cooperative Union Ltd (KPCU).** Environmental Engineers "Feasibility Study for Estate Sector Rehabilitation". October 1996
- **Ministry of Agriculture, Livestock and Marketing.** Review of the Drop/check structures manual for the irrigation and Drainage Branch. July 1994
- **Government of Malawi under the auspices of the African Development Bank.** Leading Agricultural Engineer in the Malawi Agricultural Sector Study. 1993
- **Smallholder Coffee Improvement Project (SCIP), Joint GOK/IDA/CDC.** Supervision and Review Mission. March 1985.

### **FURTHER RELEVANT TRAINING**

1987                                      Development Learning and Change, Weatfield College, University of London

### **KEY EXPERIENCE**

Wide range of experience in planning of agricultural mechanization and heavy machinery operations.

Wide range of application of crop processing and storage principles to the different types of farming environments and requirements.

Detailed experience of design, specification and estimating for contracts for coffee factory construction, on-farm water supply, irrigation and produce stores.

Design, research and development of alternative energy systems especially Solar Energy.

Member of the joint IDA/CDC/UNIDO Project Preparation Team for the Oil Crop Processing Sub-Project of the Rural Design Project.

Head of the engineering team of the Malawi Agricultural Sector Study conducted on behalf of the Malawi Government under the auspices of the African Development Bank.

World Vision Kenya. Final Evaluation of Morulem Irrigation Project, July 2001. Technical evaluation including: evaluation of appropriateness, sustainability and quality of irrigation infrastructure, environmental components and analysis of costs and benefits of the project.

Associates in Rural Development. Technoserve Inc. USAID: Dec 2000 to June 2001. Competitiveness, Investment Opportunities and Risks under Liberalised Trade in East Africa: Case Studies of Agribusiness Firms in Kenya; Uganda and Tanzania.

African Wildlife Foundation: Dec 2001 to date. Baseline Survey Consultancy on the Conservation of Resources Through Enterprise (CORE) including background study research, questionnaire design, field testing of questionnaires, review of questionnaires, field survey, data analysis, report writing and presentation. A total of 167 questionnaires with 1,400 variables were analysed.

## LECTURING (TEACHING) EXPERIENCE

- **A304: Agricultural Mechanization** (service course to Faculty of Agriculture)
  - **FAE 554: Agricultural Mechanization** (final year course – B.Sc Agric. Engineering Programme)
  - **AE 414: Functional Analysis of Agricultural Machines** (course in MSc in Agric. Engineering Programme)
  - **CCS 007: Science and Technology in Development** (Common undergraduate course offered to Bachelor of Arts, Bachelor of Land Economics, and Bachelor of Commerce).
  - **FAE 552: Farm Machinery II** (Final year course in B.Sc Agric. Engineering Programme incorporating R&D of Farm Machinery, Machinery Testing and Industrial Engineering).
  - **FAE 561: Renewable Energy Resources** (final year course in B.Sc Agric. Engineering Programme).
  - **FEB 571: Technology Policy Issues** (final year course in B.Sc Agric. Engineering Programme).
- FAE 592: Engineer in Society** (final year course in B.Sc Agric. Engineering incorporating the History of Engineering, Professional Practice and Ethics, Technology Transfer and Environmental Impact Assessment).

## SEMINARS AND CONFERENCES

August 1981	United Nations Conference on New and Renewable Sources of Energy in Nairobi, Kenya
December 1981	Provincial Workshop of Increasing Food Production, Embu, Kenya
November 1982	National Research and Extension Workers workshop on Dryland research and Development in Embu, Kenya
July 1988	Postgraduate Research Conference, Department of Agricultural and Environmental Science, University of Newcastle Upon Tyne, England
September 1988	Engineering Advances for Agriculture and Food Jubilee conference of the Institution of Agricultural Engineers, Cambridge, England
May 1991	"Agricultural Engineering and the Environment" – Annual convention and conference of the Institution of Agricultural Engineers, University of Newcastle Upon Tyne, England
September 1998	Global Ergonomics Conference, Cape Town, South Africa
September 2000	Kenya Conservation Tillage Initiative Stakeholders Workshop, Garden Hotel, Machakos, 19-21 September
November 2002	Africa Technology Policy Studies Network (ATPS) Annual Conference and Workshop, Abuja, Nigeria. 10 <sup>th</sup> – 15 <sup>th</sup> November 2002.
July 2003	"Towards a more focussed and modern Faculty of Agriculture", A Report of the Faculty of Agriculture Curricula Review Committee, University of Nairobi, Kabete Campus, Nairobi.

## **PUBLICATIONS, THESES AND REPORTS**

Mutuli, D.A. (1980).	"Design of a solar supplemented continuous flow dryer for coffee". Third year design project dissertation. University of Nairobi (unpublished)
Mutuli, D.A. (1981)	"Draft proposals for the practical training programme for graduate engineers serving the coffee industry in the Ministry of Agriculture". Government Working Paper (unpublished)



- Mutuli, D.A. (1982) "The general position paper for the coffee factories section of the Ministry of Agriculture." Government Working Paper (unpublished)
- Mutuli, D.A. et al. (1985) "The joint GOK/IDA/CDC/Smallholder Coffee Improvement Project supervision and review mission report." Report of findings submitted to the project steering committee.
- Mutuli, D.A. (1985) "Mechanical drying of Arabien Coffee". Proceedings of the Annual Coffee Seminar, Eldoret, Kenya
- Mutuli, D.A. (1985) "Small holder Coffee Processing in Kenya". Proceedings of the Annual Coffee Seminar, Meru, Kenya
- Mutuli, D.A. (1988) "Infiltrating solar collectors for crop drying". Proceedings of the Annual Postgraduate Research Conference, University of Newcastle Upon Tyne, England
- Mutuli, D.A. (1988) "The performance of an air-infiltrating solar collector" M. Phil thesis. University of Newcastle Upon Tyne, England.
- Mutuli, D.A. (1990) "An Investigation into the effect of Cultivator Design on seedbed preparation". Proceedings of the Annual Postgraduate Research Conference, University of Newcastle Upon Tyne, England
- Mutuli, D.A. (1992) "Advances in Agricultural Machinery Technology Towards Sustainable Development." Proceedings of the KSAE Annual Seminar, 5-7<sup>th</sup> August
- Marennya, M.O., Kaumbutho, P.G., Mutuli, D.A. and Kamau J.N. (1993) "Simulation of the Materials Handling Systems in a Sugarcane Mill Yard - A case study". Paper accepted for publication in the AMA Journal.
- Shitanda, D., Mutuli, D.A. and Odongo, F. (1994) "Indigenous Vegetable Oils in Kenya as a Diesel Fuel". In Proceedings of the Kenya Society of Agricultural Engineers' 1994 International Conference August, Nairobi, Kenya
- Mutuli, D.A. (1994) "Agricultural Mechanization in Kenya: A Review of Policies and Strategies to date". In Proceedings International Conference August, Nairobi, Kenya

- Mutuli, D.A. (1994) "The Role of Agricultural Engineering in Food Manufacturing". In Proceedings for the Kenya Institute of Food Science and Technology Conference, Nairobi, Kenya, November 7<sup>th</sup> – 9<sup>th</sup>
- Mutuli, D.A. (1994) "Some Engineering opportunities for the Sustainable Development of African Agriculture." Proceedings of the FAOE/IEK All African Engineers Conference, December, Nairobi, Kenya
- Shitanda, D., Mutuli, D.A. and Odongo, F. (1994) "Renewable Energy Resources for Sustainable Development." The case for Diesel Fuel Substitutes". Proceedings of the FAOE/IEK All Africa Engineers Conference, December, Nairobi, Kenya
- Marenya, M.O., Mutuli, D.A. and Kaumbutho, P.G. (1994) "Review of the Drop/Check Structures Manual" Report of findings from a study carried out for the Irrigation and Drainage Branch, Ministry of Agriculture, Livestock and Marketing, Government of Kenya, Nairobi
- Mutuli, D.A. et al. (1994) "The GOM/ADF Malawi Agricultural Sector Study: A reported findings submitted to the Government of Malawi
- Marenya, M.O., Kaumbutho, P.G. and Mutuli, D.A. (1998) "An Operational Systems Model for Cane yard Operations". Paper accepted for Publications in the ANSTI Journal (African Journal for Science and Technology)
- Mutuli, D.A., Lubwama, F.B. and Marenya, M.O. (1998) Hot-working Environments: A critical look at a typical Sugar Manufacturing Concern in Kenya." Global Ergonomics: Proceedings of the Ergonomics Conference, Cape Town, South Africa 9-11<sup>th</sup> September 1998 – Elsevier, Amsterdam
- Mutuli, D.A. (1998) "Conservation Tillage: Concepts, Implements and Research Experiences in Kenya." Proceedings of the Conservation Tillage Training Workshop held at the National Dryland Farming Research Station, Katumani, Kenya between 22 – 26<sup>th</sup> November
- Biamah, E.K., Rockstrom, J and Mutuli, D.A. (1998) "Transition to Conservation Tillage: Critical issues and Experiences in Kenya." Proceedings of a Conservation Tillage Training Workshop held at the National Dryland Farming Research Station, Katumani, Kenya between 22 – 26<sup>th</sup> November

- Mutuli, D.a. and Lubwana, F.B. (1999) "The Agricultural Dust Hazards; A critical look at a Typical Sugarcane Manufacturing Concern in Kenya." Work Science in sustainable Agriculture pp.256 – 260.
- Majale, M.M., Morumbasi, J. and Mutuli, D.A. (2000) "Occupational Safety and Health in the Construction Industry in Kenya." Proceedings of the 14<sup>th</sup> Triennial Congress of the International Ergonomics Association, San Diego, California, U.S.A.
- Mutuli, D.A., Onyoyo, H.A. and Makhonge, P.W. (2000) "Situations Analysis of Occupational Safety and Health in Small Scale Sugarcane Proceedings of the 14<sup>th</sup> Triennial Congress of the International Ergonomics Association, San Diego, California, U.S.A.
- Schmidt, I., Lokai, L., Mugo, G., Mutuli, D.A., Ndele, S., Odhiambo, F., Gandi, O., Otieno, W. and Owubah, C. (2001) "Final Evaluation Report of the Morelum Irrigation Scheme Project Phase II (1997 – 2001)." United States Agency for International Development/World Vision Kenya.
- Mutuli, D.A. and Okoth, M.O. (2001) "Toward Agro-Industrial Sustainability in Kenya through Energy Conservation and other technologies". Proceedings of the Annual Conference of the Institution of Engineers of Kenya, Nairobi.
- Ikitoo, E.C. and Khayrallar, W.A. (Eds) (2001) [Chapter Contribution] "Sisal; Past Research Results and Present Production Practices in East Africa – Present Status, Problems, Opportunities and Future Prospects." United Nations Industrial Development Organization (UNIDO)/Common Fund for Commodities (CFC), Technical Paper No.8. Vienna.
- Mutuli, D.A. (2003) [Chapter Contribution] "Tillage in Land Productivity – Chapter 6" In Gachene, C.K.K. and Kimaru, G. (Eds). "Soil Fertility and Land Productivity – A guide for extension workers in the Eastern Africa Region," Technical Handbook No.30, Regional Land Management Unit (RELMA), Nairobi, Kenya. (ISBN 9966-896-66-X)
- Marenya, M.O. and Mutuli, D.A. (2003) "Simulating Sugarcane Handling Operations in a Kenyan Factory Mill Yard" Proceedings of the First International Conference of the Operations Research Society of Eastern Africa, 17<sup>th</sup> – 19<sup>th</sup> September 2003, Nairobi, Kenya.