

**CURRICULUM VITAE/2011 FOR PROFESSOR LEVI SHADEYA-MUDOGO
AKUNDABWENI-2011**

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1.0 IDENTIFICATION DETAILS

Name: LEVI SHADEYA-MUDOGO AKUNDABWENI, PhD, MSc. BSc.
Citizenship: Kenyan
Marital Status: Married
Religion: Christian (Quaker)
Personal Phone: (+254) -722716517

2.0 M Y DESIGNATION



Agricultural Production Systems Agronomist

- Associate Professor- Department of Plant Science & Crop Protection
- Associate Dean-Faculty of Agriculture

Location: [University of Nairobi-Faculty of Agriculture -Kenya](#)

Industry: [Higher Education](#)

Institutional references:

College of Agric. & Vet. Sciences (CAVS), Upper Kabete Campus

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Officer by courtesy of:

- Vice Chancellor: Prof. G. Magoha –University of Nairobi
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3.0 MY MEMBERSHIPS IN PROFESSIONAL BODIES (Past & Present):

Member of:

- International Society of Horticulture (ISH)
 - American Society of Agronomy (ASA-USA), Crop Science Society of America (CSA)
 - Kenya Plant Breeders Association
 - African Crop Science Society
 - College of the Institute of Natural Resources in Africa
 - international Bible Study Fellowship (7th Year study Fellow)
-

4.0 KEY QUALIFICATIONS

- Over 30 years experience in the field of Agricultural Research (Both International & Eco-regional), 23 years in tertiary-based agricultural education (teaching & learning) and management; Long experience in smallholder production, practices, outreach and rural agricultural development
- Instrument-based research to detect pre-breeding/agronomic useful agrobiodiversity with various tools including: Energy Dispersive X-ray Fluorescence (XRF) analysis, Near Infra Red Spectroscopy; Chlorophyll Fluorescence Analysis; Polymerase Chain Reaction (PCR) and Restriction Fragment Length Polymorphism (RFLP) and Cellulose Solution Digestion Procedure for estimating forage digestibility quality
- Over 10 years in Senior (Higher Education) management and well versed with hard and soft skills such as human & financial resources management
- Widely travelled and resided internationally, regionally and locally with an equal wide exposure in human relations
- Fluent in both English and Kiswahili.

5.0 LEVEL OF EDUCATION & TRAINING

PhD. In Environmental Agronomy & Forage Breeding -South Dakota State University (SDSU) - Brookings-SD, USA (1981–1984); **MSc.** In Forage Production Systems (Arable & Range)- (SDSU 1978–1981); Brookings-SD, USA; **BSc.** In Agronomy and Applied Plant Genetics - University of Minnesota St. Paul-Mn. USA; (1975–1978).

5.1 In-service, on-the job and/or n-basket training, among others

- **IT & Computing:** Highly -developed computer skills in use of word processing, Microsoft Word; power point; Microsoft Excel graphics, Biometric spreadsheet applications including intensive use of Internet. Skills in relevant agro- analytical approaches & tools via computing; and educational management information systems; Extensive user of SPSS and SAS and other statistical packages.
- **Training in Transformative leadership, Human resources and Financial Management- Federation of Kenya Employees; (FKE)**
- **Management of Arid and Semi-arid Ecological Systems.** (6-week course programme in Israel). Coverage:: Water management, Systems for reversing desertification process, Professional, economic, social & institutional aspects of improving, understanding, assessing and developing arid semi-arid regions, Rapid planning methods, Forests &

community programmes & Management of desert ecologies.

- **United Nations University-Institute of Natural resources in Africa (UNU-INRA):** Four-week training Coverage: Agricultural Resource Management (ARM) in Africa, Tropical Soil & water resources management; Economic Geography & African commodity problems. Sustainable agriculture, Home gardens. Agroforestry.
- Toast Masters International certificate in Leadership and Communication skills.

5.2 Pre-university education: Kenya Advanced Certificate of Education (**KACE**) - Thomson's Falls High School-Kenya (1972-1973); Kenya Certificate of Education (**KCE**) - Musingu High School-Kenya (1968-1971).

6. MY WORK RECORD

6.1 Within employment

- 2007-
Present
2006
- Associate Dean:** of Faculty of Agriculture in the College of Agriculture & Veterinary Sciences-Upper Kabete Campus of the University of Nairobi. Member of Departmental, Faculty, College Management, College Academic Boards and Senate.
- Acting Dean** – Faculty of agriculture with Board memberships as in above.
- 1999
-
- Head of Department (Chairman)** – Department of Crop Science with due Board memberships.
- 1994-
1995
- Visiting scholar/trainee** (laboratory practices): One year attachment Trainee Scientist on Italian government-International Plant Genetic Resources Institute (IPGRI) funded capacity development programme at the joint lab of the National Council of Science & University of Naples-Portici, Naples-Italy.
- 1991-
1995
- Senior Lecturer:** Department of Crop Science, University of Nairobi.
- 1987-
1991
- Lecturer:** Department of Crop Science, University of Nairobi.
- 1992
- Visiting scholar:** University of Missouri-Columbia and California Institute of Biological Research (CIBRI), La Jolla, USA in the Cellulose Solution Digestion Procedure Research laboratory under Prof Sleper.
- 1992
- Visiting scholar:** University of Missouri-Columbia and California Institute of Biological Research (CIBRI), La Jolla, USA in the arbitrary Primed PCR Strategene lab at Lahore.
- 1985-
1987
- Plant breeder:** (Cowpea): International Institute of Tropical Africa (IITA)-Ibadan, Nineria
- 1982-
1984
- Research Fellow:** International Livestock Centre for Africa (ILCA)-Addis Ababa Ethiopia in the Forage Legume Improvement Programme

1978-1981 **Graduate Research Assistant:** USA Mid-west OLD WEST COMMISSION Project funded Graduate Research/Teaching Assistantship appointment in the Department of Plant Science at South Dakota State University. Field Research attachment on Restoring South Dakota Deteriorated Rangelands West of the Missouri.

6.2 External Appointments: National, Regional and/or international

2011 Appointment to **Kenya Agricultural Productivity & Agribusiness Project (KAPAP)** on Research Proposal Review and Advisory Committee (RePRAC) – Cereals Value Chain- In service to Kenya government. RePRAC is responsible for the coordination of technical review of Competitive Research Grants (CRG) proposals & their approval while also playing an advisory role to KAPAP secretariat.

2011 **ADVISORY: Improved Maize for African Soils”- (IMAS)-Operating Committee (IMAS-OC)** supported by the Bill and Melinda Gates Foundation and USAID in partnership with CIMMYT, Pioneer Hi-Bred, the Kenyan Agricultural Research Institute (KARI), and the Agricultural Research Council (ARC) of South Africa. The partners were chosen based on their research capacity and the existence of a regulatory structure that permits transgenic crop testing and commercialization.

2010 **Agriculture Sector Coordinating Unit (ASCU)- in service to Kenya Government**
Serving member on the Research & Extension Thematic Working group (TWG) responsive to the Technical Advisory Committee of the Inter-ministerial Coordination Committee (ICC) for addressing issues articulated in the Strategy to Revitalize Agriculture (SRA).

2006-2009 **National Research Taskforce (NRTF) for the Development of the National Agricultural Research Systems Policy–in service to Kenya Government:** Serving Chair: Steered high-level intellectual capacity of the NRTF in the development of the draft NARS Policy.

1999-2005 **Kenya Bureau of Standards (KEBS):**
Sat on several technical committees on standard specifications
Chaired the agricultural industry committee

1996-2005 **National Council of Science & Technology (NCST):** Sitting member to the Allied Agricultural Specialist committee.

7.0 ACADEMIC EXPERTISE PROVIDED

7.1 Capacity Building Initiatives

2011 Resource person at the Pan African University Institute (PAUI)- Earth & Life Sciences at Ibadan –Nigeria in the resource persons proceedings for post graduate program kick-starting for the academic 2011/2012 (Representing the Regional Forum for capacity building in Eastern and Southern Africa (RUFORUM)).

2006-present Continuous participation in RUFORUM agenda and issues as dean.

- 2004 Participant in a World bank meeting in Washington, DC –USA under the auspices of IFPRI to report on the Eastern and Southern Africa survey findings underlying discussions on the establishment of the Global Open Agriculture and Food University
- 2000 Participant in the formative processes at a workshop held at ILRI-Addis Ababa campus (in Ethiopia) of forming 'Building African Scientific & Institutional Capacity' (BASIC). BASIC programme ultimately matured into a full-fledged relationship with linkage to the Forum for Agricultural Research in Africa (FARA)-an umbrella organization bringing together and forming coalitions of major stakeholders in agricultural research and development in Africa.
- 1999-2001 Obtained a funding from the then International Plant Genetics Resources Institute-IPGRI to found the Kenya Plant Genetic Training Consortium local chapter. Also obtained funds from IPGRI for MSc. field class trip to the *Kayas* in the Coastal ecology for the appreciation/application of the 12 Principles of Ecosystem management (COP 5 Annex –Convention on Biological Diversity).
- 1998-2000 Won a grant facility from the Rockefeller Foundation for the establishment of M.Sc. Biometry computer-strengthened teaching laboratory as an initiative to improve the thesis writing quality of post graduate students.

7.2 Quality assurance Exercises

- 2005, 2006 & 2007 Makerere University-Kampala, Uganda: External Examiner in the Faculty of Agriculture-Department of Crop Science.
- 2008, 2009, & University of Zambia-Lusaka, Zambia in the School of Agricultural Science in the Department of Crop Science.

7.3 Post graduate Board of Examiners and Student Research Supervision

- Post graduate students research supervision Areas of supervision: Crop Science; Agricultural Resource management; Agricultural Information & Communication Management.
- Board of Examiners Internal as well as external examiner of written theses and dissertations ; Variousy chairing defense boards at Faculty level for several years now.

7.4 Teaching & Learning provision

(a) *PhD Courses Taught at the University of Nairobi*

Feed sources for non-dry land and dry land ecologies; environment & production; emerging issues in natural resource use: Foodshed; Ecological footprints .

(b) M Sc .Courses taught at the University of Nairobi:

Current: (1) **Crop & Forage production Systems** to agronomy post graduate students in the Department of Plant Science & Crop Protection; (2) **Agricultural Production Systems:** to Agricultural Resource Management (ARM) students; (3) **Agricultural Information and Communication Management (AICM)**

Previous: (3) **Forage and Range Pastures Production;** (4) **Fundamentals of Crop Improvement;** (5) **Seed Science and Technology;** (6) **Mutation breeding.**

(c) B.Sc. Courses taught at the University of Nairobi:

Current: (1) Fodder production & Range pastures: Offered to B.Sc. Agriculture; B.Sc. Range Management & BSc. Agricultural Education and Extension students in the Faculty of Agriculture-University of Nairobi.

Previous: (2) **Field & Laboratory Experimentation-** covering *Scientific, biometric & experimental Agri-techniques.*

7.5 University of Nairobi internal assignments

Founder member in Development of the Wangari Mathaai Institute of Peace and Environmental Studies strategic plan

Development of Faculty of Agriculture Strategic Plan

In charge of the Faculty of Agriculture Business Unit (FABU)

Sub-committee of the Deans Committee on Computerization of Use of teaching space at the University of Nairobi

Sub-committee of the Deans committee on Examination cheating

Sub-committee of the Deans Committee on public and inaugural lectures

Task Force for the business establishment of Royal Satima water bottling project production plant at Upper Kabete Campus

8.0 RESEARCH PORTFOLIO

8.1 Research grants/areas

Record of Grants obtained:

<p>8.1 Source: RUFORUM (Regional Forum for Capacity Building in Eastern and Central Africa), Current funding USD 59,978 shared between Makerere and University of Nairobi: 2010/2011</p>	<p>Conserve and screen premium value therapeutic micronutrient rich indigenous plant biodiversity and products on smallholder farming systems of Lake Victoria Basin in East Africa.</p>
<p>8.2. Source: VICRES LAKE BASIN CGS. Duration: 3 years; Initial funding: \$150000; 2005-current.: 2006-2009).</p>	<p>Linking Functional Agrobiodiversity to Land Use and Nutraceutical-based Cropping as a Poverty and Hidden Hunger Reduction Strategy: A Gender-Based Pilot Study on Small hold Women Farmers in the Lake Victoria Basin.</p>

<p>8.3. Source: International Atomic Energy Agency- CRP-Food and Agriculture; 2005-current Duration: Initial Funding: Jan 2005; total: \$8000.</p>	<p>Germplasm Enhancement and Maintenance Based on X-ray Fluorescent Spectroscopic Criterion as a Crop Improvement Strategy in the African Leafy Vegetable Species modeled on participatorily selected on-farm Solanum Leafy Vegetable populations.</p>
<p>8.4. Source: ECO-BIO Network of ASARECA. 2005-2007; Total: \$150000.00 for 3 years.</p>	<p>Marker Assisted Selection of the Stay-Green Trait of Sorghum to Enhance Terminal Drought Tolerance in Eastern Africa” involving Kenya, Uganda, Eritrea, Ethiopia and Sudan</p>
<p>8.5 Source: The Rockefeller Foundation-FORUM; Funding Year: 2003; Duration: 1 Year; Initial Funding: \$60,000; Total: \$60000</p>	<p>Applied animal manure on African Leafy Vegetables grown in Lugari and Keiyo districts for agronomic performance and nutritional (vitamin and trace mineral) quality.</p>
<p>8.6 Source: International Plant Genetic Resources Institute-Sub-Saharan Africa (SSA) Office; 2002; Duration: One week; Initial Funding: \$10,000; Total: \$10000.</p>	<p>Kenya Plant Genetic Resources Training Consortium (KPGRTC): A stake holder’s one-week workshop on Master Plan Proposal writing in search of seed money for driving the Consortium’s future activities.</p>
<p>8.7 Source: International Plant Genetic Resources Institute (IPGRI). Funding Year: 2002 with extensions; Duration: 2002/2004: USD18000</p>	<p>The African Leafy Project: Characterization of the micronutrient density in African germplasm.</p>
<p>8.8 Source: The Rockefeller Foundation Science Grant; Funding Year: 1998; Duration: 2 yrs. Initial Funding: \$19,000 with extension. Total: \$26000</p>	<p>Established the M.Sc. Biometric Teaching Laboratory with 12-workstation for strengthening Biometry teaching at the Faculty of Agriculture at the University of Nairobi which led to the development of a revised post graduate statistics course;</p>
<p>8.9 Source: United Nations University/Institute of Natural Resources in Africa (UNU/INRA). 1991; Duration: 1 year; Total: \$7000.</p>	<p>Kenya Country Situation Report on Useful African plants, Home gardens and food preparation from them.</p>
<p>8.10 Source: International Board for Plant Genetic Resources (now IPGRI).Funding Year: 1992; Duration: 6 months; Total: \$5000.</p>	<p>International Board of Plant Genetic Resources (IBPGR)-Supported USA laboratory tours to learn novel procedures potentially useful for gene/trait screening in indigenous germplasm.</p>

8.11 Source: Supplementation from Pasture Network for Southern and Eastern Africa (<i>PANESA-ILCA</i>) grants in support of 2 M.Sc. Students for 1 yr. 1990; Total: \$1500	Capacity Building in Research Agronomy of the African Clovers for Kenya highlands.
8.12. Source: Univ. of Nairobi Deans Committee Research Grant; 1988. KES. 90000.	Collection of Kenyan wild legume germplasm and breeding for possible introduction into the semi arid (ASAL) cultivation systems

8.2 Research products

Recent

1. **Levi-Shadeya-M Akundabweni**, G. Mulokozi and D M Maina. 2010. Characterization of African leafy Vegetables for Organo- and Mineral Micronutrient Densities based on X- ray Fluorescence and High Performance Liquid Chromatography. African Journal of Food and Nutrition Development (AJFAND) 10: No. 11 (2010)
2. **Levi-Shadeya-M Akundabweni**, R.W. Munene, D M Maina and S.K Bartilol. 2010. Mineral Micronutrient Density in Local Cereals Sample from Bungoma, Maseno and Kibwezi areas. (AJFAND) 10: 11 (2010)
3. **Levi-Shadeya-M Akundabweni**, R.W. Munene, D M Maina and J.M. Mangala. 2010. Mineral Micronutrient Density Characterization Using Energy Dispersive X-ray Fluorescence (XRF) Analysis in Four On-Farm Kenyan Wild African Fruit tree Germplasm. JAfrican Journal of Food Agriculture Nutrition and Development (AJFAND On Line) Volume 20 No 8.
4. Maobe S. N, **L.S.M Akundabweni**, M.W.K. Mburu, Ndufa J.K. J.G. Mureithi, C.C.K Gachene, F.W. Makini and J.J. Okello. 2010. Effect of Green manure and inorganic Fertilizer Urea Nitrogen Sources And Application Rates on Harvest of maize (*Zea mays* L.). World Journal of Agric Scie 6 (5) 532-539
5. Maobe S. N, **L.S.M Akundabweni**, M.W.K. Mburu, Ndufa J.K. J.G. Mureithi, C.C.K Gachene, F.W. Makini and J.J. Okello. 2010. Residual Effect of Mucuna pruriens Green manure Application Rate on Maize (*Zea mays* L.) Grain Yield World Journal of Agric Scie 6(6) 720-727, 2010.
6. Maobe, S. N Mburu, M.W. K, Ndufa, J. K; **Akundabweni, L. S**, Mureithi, J. G, Gachene, C. K. K, Makini, F, Okello, J. J. 2010. Potential Effect of Mucuna Green Manure Application Rates on the Decomposition and Availability of Nitrogen in Varying Soil Moisture Levels under Greenhouse Conditions. J. of Sustainable Development in Agriculture & Environment Vol. 5(1). 2010 ISSN 0794-8867. ©Paraclete Publishers 5.
7. Maobe, S. N Mburu, M.W. K, Ndufa, J. K, **Akundabweni, L. S**, Mureithi, J. G, Gachene, C. K. K, Makini, F, Okello, J. J. 2010. Effect of Mucuna Green Manure Rate Applied on Maize Grain Yield During the Application Season. J. of Sustainable Development in Agriculture & Environment Vol. 5(1). 2010 ISSN 0794-8867. ©Paraclete Publishers 5.

8. **Levi-Shadeya M Akundabweni**, Namutebi, S A, Kimiywe, J, O. 2008. Screening and Mapping Nutraceutical Dense Biodiversity on Women Smallholder Farms Based on Farmer's Decision Points and X-ray Fluorescent Spectroscopic Analysis. *Acta Horticulturae* 806. International Society for Horticultural Science; Leuven, Belgium. 739 pp.
9. Maobe, S. N., Mburu, M.W.K., Ndufa, J.K. **Akundabweni L. S.M.**, 2008. Legume biomass quantity requirement for maize production with reference to *mucuna* green manure in Kenya, In: Proceedings of the XXI International Grassland Congress and VIII International Rangeland Congress: Multifunctional Grasslands in a Changing World. Volume II. 29th June - 5th July, Hohhot, China. pp 239.
10. Muthoni, J. and **Akundabweni L.M.S.** 2008. Effects of low rates of nitrogen and phosphorus fertilizers on productivity of an annual African clover, *Trifolium quartinianum* cultivar Mealton 5, for zero grazing in Kenyan highland smallholdings. *African Journal of Range & Forage Science* 2008, 25(1): 29–35.
11. Hutchinson, M, Kipkosgei, LK , Obudho, E and **Akundabweni L. S. M.** 2006. The effect of farmyard manure and calcium ammonium nitrate on vegetative growth, leaf yield and nutritive quality of *Cleome gynandra* (Cat's Whiskers) in Keiyo District, Rift Valley Province. *Journal of Agriculture, Science and Technology* Vol. 8, No.1 (2006).
12. Akuja, T E, **Akundabweni L.S.**, Chweya, J.A. 2003. Effect of Intercropping Finger Millet with two Indigenous Legumes at different Nitrogen Levels in Kabete and Njoro, Kenya. *Eastern Africa Journal of Rural Development* Vol. 19, No. 1.
13. Stigerstedt, P.M. and Akundabweni L.S.M. 2001. Capabilities and Capacities In Eastern Africa For Training In Plant Genetic Resources For Promoting Conservation And Use. International Plant Genetic Resources Institute, IPGRI, Rome.
14. **Akundabweni L.S.M**, Monti, L; Fonzo, D. 2000. Detached leaf test as a rapid stress appraisal in cowpea germplasm, *Vigna unguiculata* (L) Walp. for draught resistance. *Discovery and Innovation*, 12 (3-4): 132 – 136 (2000).
15. **Levi S. M Akundabweni, Agnes Namutebi, Atero, A.A. Orwa, H.O. Kumbe, M. and Judith O Kimiywe.** Linking Nutraceutical-based cropping and dietary Agrobiodiversity to land use in Lake Victoria basin women-operated smallholdings. Book chapter of final project as a technical paper for publication prepared for Victoria Research Project Technical Paper.

PAPERS PRIOR TO 2000

16. **Akundabweni L S M.** 1996. Seed Production of Native hay clovers in the highlands of eastern Africa. *Tropical Grasslands* **30:000-000**.
17. **Kahangi, E. M., J. A. Chweya, L S M Akundabweni.** 1996. Cardinal Temperatures and Thermal times for vernalization in carrot cv. "Nantes". *African Crop Science Journal*.
18. Kahangi, E. M., J. A. Chweya, **L S M Akundabweni** and D.M. Munyinyi. 1996. Effect of natural and artificial chilling in carrot cv. "Nantes" at different locations in Kenya. I. Effect of bolting and flowering. *J of Horticultural Science* 71 (5) 000-000.
19. Kahangi, E. M., J. A. Chweya and **L .S .M. Akundabweni.** 1996. Effect of

natural and artificial chilling in carrot cv. "Nantes" at different locations in Kenya. II. Effect on seed maturity, seed stalk heights, umbel number, seed yield and subsequent germination of the harvested seed. J. of Horticultural Science 71 (5) 000-000.

20. **Akundabweni L .S. M;** and Monti, L. Abscisic acid (ABA) accumulation in roots and leaves of *Vigna unguiculata* L., Walp. under imposed water stress. 1995. Legume Research J. 33:11-13.
21. **Akundabweni L. S. M. 1995.** The potential of the arbitrarily primed polymerase chain reaction as a method to distinguish different genetic lines in *Vigna unguiculata*, L. (Walp.) and in the related botanical strains. South African J. of Botany 61:1-5.
22. **Akundabweni L. S. M,** and D Sleper. 1993. The Prepared Cellulase Solution Digestion for screening forage grass germplasm for digestibility. African J of Crop Science 1: 67-71.
23. **Akundabweni L S M.,** J R Lazier, and G Lemme. 1991. Morphological and soil measurements for determining ecotypic variation in *Trifolium temense* in the Ethiopian highlands. Discovery and Innovation 31: 99-104.
24. **Akundabweni L S M.,** J R Lazier, and G Lemme. 1991. Comparative growth of some African clovers planted at different times. Tropical Grasslands 25: 358-354.
25. **Akundabweni L.S,** Peter-Paul, C. and Singh, B. B. 1989. Evaluation of elite lines of cowpea (*Vigna unguiculata* (L)) for leaf fodder cum grain. 1989. Tropical Agriculture (Trinidad) 67: 133–136.
www.ss dairy.org/AdditionalRes/CropResidues/chap4.htm
26. **Akundabweni L S M.** 1984. Forage potential of the genus *Trifolium* in the Ethiopian highlands. PhD Thesis. South Dakota State University. Brookings, South Dakota, USA.
27. **Akundabweni L S M.** 1980. Stand Densities of Interseeded Alfalfa (*Medicago sativa*); and the effect of nitrogen and phosphorus on establishment of 5 warm season grasses. M. Sc. Thesis. South Dakota State University. Brookings, South Dakota, USA.

SYMPOSIA/WORKSHOP PAPER PRESENTATIONS

28. Akundabweni L.S.M. et al, – Screening and Mapping Nutraceutical Dense Biodiversity on Women Small holder farms on farmer’s, Decision points and X-ray fluorescent spectroscopic analysis, Papers presented at the International symposium “Under utilized Plant Species for Food, Nutrition, income and Sustainable development”. Arusha, Tanzania, **3–7th March 2008**.
29. Akundabweni L S M., Namutebi S A., Kimiywe O. J., Rweyinu, L. -Designing a nutraceutical – Indicated Mineral Micronutrient Phyto Diversity Study In the Lake Victoria Basin Small holdings. Lessons learnt. The Bio-EARN/VICRES Scientific Conference; Kampala-Uganda, **24th –26th November 2008**.
30. Akundabweni L S M.-Development and Standardization of an XRF–based Plant Mineral Density Variation capture Technique toward Promising Nutraceutical Agro biodiversity in underutilized food plants. National Workshop 28th –30th April, Ministry of Higher Education, Science and Technology – KICC Nairobi, **April**

2008.

31. Akundabweni L S M. et, al, -Selenium loading in plants.What our XRF Vicres Project Data obtained from the women – operated small holdings in Bunyore and Vihiga – Kenya, Iganga – Uganda and Bukoba – Tanzania of the Lake Basin Rift Valley. Golden Agric Resource Trust (GART) workshop held in Pretoria, South Africa **8th–13th April 2008.**
32. Kiriiri, F.K., M.W.K Mburu and **L. S. Akundabweni.** 2001. Response of Green Gram (*Vigna radiata*) to fertilizer Nitrogen, Chicken manure Application and rhizobium inoculation. Paper presented at the 19th Soil Science Society of East Africa Conference held in Moshi, Tanzania (**Dec. 1-5th 2001**).
33. **Akundabweni L S M** and J A Chweya. 1995. Indigenous Plants in Agriculture. UNESCO-ROSTA workshop on BIODIVERSITY held July, 20-30 1995 at Silver Springs Hotel, Nairobi, Kenya.
34. **Akundabweni L S M., and J A Chweya.** 1993. Field Surveys on African indigenous Plants, Food Preparations from them and Home gardens in Kenya: A Situation Report. United Nations University/Institute of Natural Resources in Africa(UNU/INRA). Tokyo, Japan.
35. **Akundabweni L S M.** 1993. Research on indigenous Food Plants. Papers of the indigenous Food Plants Program presented at a workshop of the Kenya Herbarium (National Museums of Kenya).
36. **Akundabweni L S M., C P Paul, and B B Singh.** 1991. Evaluation of elite lines of cowpea (*Vigna unguiculata*, (Walp.) for dual purpose (i.e. leaf/fodder plus grain). IITA Research 3, 6-9. Ibadan, Nigeria.
37. **Akundabweni L S M.** 1990. Preliminary Studies on Grassland Renovation in Mid- western USA; applications to prospects for improving the Kenyan Semi-arid grasslands. JKUAT, Ruiru, Kenya.
38. **Akundabweni L S M.** 1989. Potential of the African annual clovers in weed suppression in a Ley Farming System. The12th Biennial Conference of the Weed Science Soc. of East Africa, Nairobi, Kenya.
39. **Akundabweni L S M.** 1988. Pasture and Forage Improvement in Kenya. First Symposium of Crop Science Society of Kenya, Nairobi, Kenya.
40. **Kahurananga J., Akundabweni L S M., and Jutzi S.** 1986. Collection and Preliminary Evaluation of some Ethiopian species In: Pasture Improvement Research in Eastern and Southern Africa (A. Katigile, ed.). IDRC, Ottawa,Canada.
41. **Akundabweni L S M.** 1985. Forage Potential of Trifolium species. In:: Potentials of Forage Legumes in Farming systems of Sub-Saharan Africa (Haque and Jutzi S., eds.). Proceedings. ILCA, Addis Ababa, Ethiopia.
42. **Akundabweni L S M. and G. Lemme.** 1984. Effect of applied Phosphorus on two native clover species in the Ethiopian Highlands. ASA, CSSA, SSA, Las Vegas, Nevada, USA.
43. **Akundabweni L S M.** 1983. Native clovers of the Ethiopian Highlands: the Backwoods champions. ILCA Newsletter 4, 5-6. Addis Ababa, Ethiopia.
44. **Akundabweni L S M and Arvid Boe.** 1981. Seed predation by

Acathoscelides fraterculus (Hom.) in American licorice (*Glycyrrhiza lepidota* (Pursh.) in germplasm populations from South Dakota and North Dakota. Proc. of South Dakota.

8.3 Outreach & Community roles

- 2006-2010: Regular field based training of smallholder women operators in Vihiga (Kenya) and Iganga to link land use and agro-biodiversity within the catalysis of nutraceutical mineral micronutrient interest inherent in indigenous vegetables & other food plants. Workshops held at Chavakale High School and subsequently in Iganga during the project life under VICRES Competitive Research Grant.
 - 2011: Field based farmer group training held both in Vihiga (Kenya) and Jinja (Uganda) on the construction of Raised bed planting system as a premium based technique for premium value indigenous vegetables benchmarked on exotic varieties under VICRES Competitive Research Grant.
 - 2003-2011: Chairman of Ngong Road Friends Schools-Primary- Ngong Road Monthly Meeting of Friends
-

9.0 CONSULTANCY PORTFOLIO

1. Position held: Agricultural Planner/Agronomist Consultant for GIBB Africa Ltd

Relationship with the firm: Non-employee

Consultant Tasks-2011

- Reviewing available previous studies and reports with focus on land and water resources, human resources, land tenure and agriculture;
 - Responsible for collection and analysis of agricultural and other related data and information;
 - Preparation of irrigated agriculture development plans based on demand for current and proposed crops;
 - Providing counterpart staff training in agronomic, extension and outreach consultancy
 - Participating in preparation of deliverables and reports.
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2. Lower Kuja (Nyatike district): Irrigation Development Project – Consultant agronomist for developing an agricultural development plan on a 7,700 ha project area

- Main project features: Feasibility study; Irrigated Cropping and Preparation of tender documents for the implementation of the Lower Kuja Irrigation Development Project.
- Activities performed: Reviewed previous studies and reports with focus on land and water resources, human resources, land tenure and agriculture; Collected and analyzed agricultural data and information; Managed the Demand Verification for the current and proposed crops; Provided proposals for preliminary cropping patterns; Prepared irrigated

agriculture development plans; Proposed need for counterpart staff training and preparation of deliverables.

Client: National Irrigation Board

Responsibility: Agronomist consultant

3. Curricular development services provided to Bukura Agricultural College (2009)

Position held: Projector leader/Coordinator

Name of Firm: Faculty Advisory Business Unit (FABU) Faculty of Agriculture-UoN

Relationship with the firm: Employee

Consultant Tasks: Coordination of Curriculum development consultancy services to Bukura Agricultural College

Extensive curriculum review and overhaul of diploma curricular: (i) Agricultural Extension and Rural Development; (ii) Agricultural Extension & Education; (iii) Horticulture; (iv) Agriculture & Biotechnology; (v) Animal production; (vi) Agriculture, human ecology and consumer science. Conducted surveys to capture views of the academic staff, current students, alumni, and Public and Private sector respondents prior to re-engineering the College curricular. Ultimately delivered recommendations for infrastructural development (e.g. Computer Lab, Library and Model farms to match the new curricular.

Client: Board of Trustees-Bukura Agricultural College.

4. Institutional & curriculum review & short courses development for academic staff enhancement (2009/10)

Position held : Agriculture Consultant

Name of Firm : Prof. Eucharia Kenya for Development Partners in Higher Education (DELPHE) project funded through the British Council,

Relationship with the firm: Non Employee

Assignment: Institutional Analysis & curriculum review; short course development logistics taking into account the special academic circumstances at: (a) Kordofan university (Arabic lingua) and (b) NUR (francophone to Anglophone educational transition). Reviewed the curricular on offer in relation to Full Time Staff Equivalent (FTSE) capacity; laboratory and field infrastructure; grading system and harmonization with similar institutional frameworks in the south. Undertook needs assessment for staff enhancement through short courses. Delivered recommendations for building staff & student exchange capacity on a south-south interaction nexus. Part of the effort led to opening up a staff exchange window with Dr. Ali Eisa of Kordofan University applying to the University of Nairobi and having been invited as a visiting

lecturer in the Department of Agricultural Economics. The Modular credit system of NUR is now better understood for ease of processing MSc applicants to the faculty of Agriculture at the UoN.

Client : Kordofan University (Sudan) &
National University of Rwanda (NUR).

5. Food security (2009)

Name of Firm : Log Associates
Position held : Consultant, Agronomist
Location : Kenya

Relationship with the firm: Non-employee

Detailed Tasks

- Planning, coordinating, leading and supervising food security activities;
- Analyzing collected data, writing analytical reports and preparing presentations.

Responsibility: Team Leader (Agriculture)

National Agriculture and Livestock Extension Programme (NALEP): The main project feature was study on gender and drugs & substances abuse issues within agricultural sector in Kenya for National agriculture and Livestock extension programme.

Responsibility: Agriculturalist.

6. Southern Nyanza Community Development Baseline Project (2006)

The main project feature was the study of rural communities in order to reduce poverty and improve livelihood:

Activities performed:

- Collecting data on household asset ownership, literacy levels, HIV/AIDS awareness, access to safe water, sanitation adequacy, reproductive health, gender equality and community awareness on environmental issues as well as identifying and filling any information gaps that may exist from previous surveys (RIMS); their effects food security; analysis and documentation of baseline information
- Determining child malnutrition levels
- Consultant in the areas of land and water development and management with interest in project feasibility;
- Planning, implementation, monitoring and evaluation of training in agricultural extension in irrigation water management issues; agro meteorology and climate.

Client: Ministry of Planning and National Development

Responsibility: Consultant

7. Training programme on quality extension services for farmers (1996):

The main project features involved addressing the shortcomings of the extension staff for the benefit of the farmers and the country as a whole.

Client: Civil Service Reform Secretariat Office of the President

Responsibility: Consultant

8. Professional Evaluation and Research Consultants (PERC) International (1994)

Worked with the agricultural side of the Executive Development Initiative (EDI) arm tailored for securing peoples participation in rural development activities.

Client: NCKK

Responsibility: Capacity Building Unit- Trainer

9. Diagnostic appraisal study of the economic potential of women (1991 Western Kenya).

Ways and means for organizing women in small groups for engagement in income-generating projects in Western Kenya

Client: IDRC

Responsibility: Crop scientist

10. Bomet District Drought Recovery Program (1993)

The activities performed were preparation of administrative budgets and supervision of a staff of 35 full time government agricultural employees to engage in drought recovery initiatives with the direct intervention of the FAO country programme office in Nairobi.

Client: FAO

Responsibility: National Consultant- Agronomist

Signed:

