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CV-Prof. George N. Chemining'wa

a. SUMMARY

I am an agricultural scientist specialized in agronomy. I have implemented many research projects and outreach activities with colleagues from different institutions and disciplines. Most of these projects have supported Masters and PhD students. I have published papers in many peer reviewed journals and participated in many academic fora. I am knowledgeable and experienced in facilitating rural innovation processes, project development, implementation, monitoring and evaluation. I have participated in the formulation of policies for the national agricultural research system. I am a strongly committed and prolific trainer and mentor of Undergraduate, Masters and PhD students. I have also actively participated in the design, development and implementation of academic curricula. I am a team player as reflected in collaborative efforts I have forged in teaching, research and supervision of postgraduate students. I am a member of several professional associations locally and internationally. I have served on many committees at different echelons of the University of Nairobi and was Chairman of the Department of Plant Science and Crop Protection with effect from July 2011 to July 2017. I am currently the Dean of the Faculty of Agriculture, a responsibility I took up with effect from June 22, 2018. In a nutshell, I have demonstrated strong commitment to delivery of quality education service to the University of Nairobi clients.

b. PERSONAL DETAILS

Name:	Prof. George Ndiema Chemining'wa
Date of Birth:	November 10, 1967
Marital Status:	Married
Profession:	Agricultural scientist (agronomist)
Nationality:	Kenyan
Current position:	Associate Professor, Dept. of Plant Science and Crop Protection & Dean Faculty of Agriculture College of Agriculture and Veterinary Sciences University of Nairobi

CV-Prof. George N. Chemining'wa

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Phone: +254-20-2055129; Mobile: +254-721-723-806
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umchemin@hotmail.com

c. EDUCATION/ACADEMIC QUALIFICATIONS

Diploma (Integrated Agric. Research for Development) –ICRA- Netherlands (2005)
PhD (Plant Science: Agronomy) - University of Manitoba (2002)
M.Sc. (Agronomy) - University of Nairobi (1994)
B.Sc. (Agriculture), First Class Honours - University of Nairobi (1990)
Kenya Advanced Certificate of Education - Njoro Boys High School (1986); 3 principals and 1 subsidiary pass (14 points)
Kenya Certificate of Education - Kapsokwony High School (1984), Mt Elgon; Division 1 (14 points)
Certificate of Primary Education- Chepkube Primary School (1980), Mt. Elgon; 33 points

d. WORK EXPERIENCE- TEACHING

1. Associate Professor (December 2013 to-date): Department of Plant Science and Crop Protection, University of Nairobi
2. Senior Lecturer (July 2008 to December 2013): Department of Plant Science and Crop Protection, University of Nairobi
3. Lecturer (June 2002 to July 2008): Department of Plant Science and Crop Protection, University of Nairobi
4. Assistant Lecturer (1995 to 2002): Department of Crop Science, University of Nairobi
5. Stand-in Instructor and Teaching Assistant (1999/2000): Department of Plant Science, University of Manitoba- teaching and handling plant physiology practicals for 4th year B.Sc. agriculture (Crop Science major)
6. Untrained Secondary School Teacher (1988-1989): Chepkube and Toroso Secondary Schools, Mt. Elgon district. I taught biology and chemistry to form 2, 3 and 4 students

e. WORK EXPERIENCE- ADMINISTRATIVE

1. Chairman (Academic and administrative Head), Department of Plant Science and Crop Protection, University of Nairobi, July 29, 2011 to July 28, 2017 .
2. Head of Crop Science Section, Department of Plant Science and Crop Protection JULY 2010 to JULY 28, 2011.
3. Acting Chairman Department of Plant Science and Crop Protection (including former Crop Science Department) over extended periods between 2003 and 2011
4. Secretary, Upper Kabete Faculty Club, University of Nairobi, 2011 to 2016.
5. Examinations Officer, Department of Plant Science and Crop Protection (2007 to JULY 2011)
6. Agricultural Officer II (1993-1995): Ministry of Agriculture, West Pokot district. Performed duties and responsibilities of District Training Officer and Divisional Agricultural Extension Officer in Kapenguria Division.

f. MEMBERSHIP OF MANAGEMENT BOARDS, COMMITTEES AND OTHER ORGANS OF THE UNIVERSITY OF NAIROBI

1. Member of University of Nairobi Senate, July 29, 2011 to date.
2. Member of Research Development and Advisory Board (RDAB), University of Nairobi, May 2011 to date
3. Member of College Management Board, 2011 to-date
4. Member of College Academic Board, CAVS, 2011 to date
5. Member of College Corruption Prevention Committee, CAVS, June 22, 2018 to date
6. Member CEBIB Board, University of Nairobi, 2010 to date
7. Member of Senate Subcommittee on E-learning, 2013 to 2014
8. Member of RDAB subcommittee on development of strategic plan for the RPE division 2012 to 2013
9. Member of Rapid Results Initiative (RRI) on the constitution 2013
10. Member, CAVS Annual Report Committee, July 29, 2012 to date
11. Member Senate Timetabling Committee, 2003 to-September 2011
12. Faculty Timetabling Coordinator 2003 to September 2011.

13. Member, Faculty of Agriculture Examinations Committee (2003 to September 2011)
14. Chairman, B.Sc. Agriculture Curriculum Review Committee February 2009 to 2012
15. Chairman Faculty of Agriculture Rural Innovations Committee (2008 to 2011)
16. Member, Faculty of Agriculture Curriculum Development Committee (2006 to September 2011)
17. Member, Faculty of Agriculture Examinations Committee (2007 to September 2011)
18. Member, Departmental Curriculum Development Committee (2006 to 2011)
19. Coordinator and member of Module II Coordination Committee (2006 to 2011)
20. Member M.Sc. Food Safety Curriculum Development Committee
21. Secretary, Faculty of Agriculture Curricula Review Committee (2003/2004 period)
22. Member, Farm Practice, 2002

g. COMMUNITY, PROFESSIONAL AND NATIONAL SERVICE

1. Board member, The Forum for Agricultural Advisory Services – Kenya (KeFAAS), 2016 to-date
2. Board Chair, The Forum for Agricultural Advisory Services – Kenya (KeFAAS), 2018 to-date.
3. Member, National Field Schools Coordination Unit, domiciled at the Ministry of Agriculture and Irrigation, 2017 to-date
4. Member, Conference Working Group, State Department of Agriculture Research, Ministry of Agriculture and Irrigation- 2018 to-date. The group organized The Inaugural High Panel Conference on Agriculture Research in Kenya, 13-14 September 2018, ICRAF Centre, Nairobi, Kenya
5. Patron and founder member, Department of Plant Science Staff Welfare Organization, University of Nairobi, 2011-2017
6. Secretary and founder member, Upper Kabete Faculty Club, University of Nairobi, 2011 to 2015.
7. Chairman, Board of Governors, Cheptais High School, Mt. Elgon, 2008 to 2011
8. Member of the National Agricultural Research Task-Force (NRTF), 2006- to 2010
9. Member of the NRTF Technical Subcommittee, 2006- to 2010

h. SELECTED SHORT COURSES AND TRAINING ATTENDED

1. World Intellectual Property Organization (WIPO) Intellectual Property (IP) training for Principals and Deans, 19-20 October 2018, LAICO Hotel, Nairobi, Kenya
2. Leadership and Management Skills Training for Academic Leaders (Principals and Deans, 21 October 2018, University of Nairobi Towers, Nairobi, Kenya
3. Field School Training of Facilitators (phase 1) by FAO 25th September 2017 to 3rd October 2017, Agricultural Training Centre-Mtwapa, Kilifi County
4. A three-day Field School Training Workshop on 5th to 7th October 2016 at Nakuru, Jumuia Conference and Resort Centre, organized by FAO and the Ministry of Agriculture, Livestock and Fisheries
5. A two-day strategic planning workshop on 9th -10th December 2015, supported by KeFAAS and GIZ, Lake Naivasha Sawela Lodge
6. A two-day training workshop on the role of the University of Nairobi in the implementation of the Constitution of Kenya 2010 and the Public Service Integrity Programme (PSIP), 16-17th September 2013.
7. Training on baseline data collection and analysis for new projects 18-22 March 2013, Nairobi, Kenya. Sponsored by ASARECA.
8. Training on environmental and social safeguards training, 5th to 8th March 2013, Sports view hotel, Kigali, Rwanda. Sponsored by ASARECA.
9. Training on Agricultural Innovation systems and value chain development approach for research. 25th February to 1st March 2013, Hilton Hotel, Nairobi, sponsored by ASARECA.
10. FP7 training under BIOCIRCLE, held 22nd to 23rd October 2012, Accra, Ghana.
11. M & E training of trainer's workshop on impact assessment, data quality assessment, planning and reporting and updating of project performance monitoring plan, held 23rd – 27th May 2011 in Kigali.
12. Capacity building for policy influencing within PROLINOVA, held 19th-20th May 2011, Agricultural Information and Resource Centre, National Agricultural Laboratories (NARL), Nairobi.

13. Training on Kenya anti-plagiarism Solution Workshop on the theme promoting original writing in the digital era: eliminating internet copy and paste habits, held 5th - 6th May 2011, KIE, NACECE Resource Centre, Nairobi.
14. Regional training on experimentation, survey design and data Analysis Using R Software, held 25th -29th October 2010, AACC, Nairobi.
15. Training of trainers on designing and delivering IAR4D/ARD learning, held 26th -30th April 2009, Pretoria, South Africa
16. Training on use of alternatives to Methyl bromide alternatives in the horticulture industry, held 15th 2008, KARI headquarters, Nairobi
17. Training in pedagogy at central catering unit (University of Nairobi), held 4th-6th February 2008.
18. Staff training on new performance appraisal tools, held 13th December 2007, Tana Kitchen Hall, College of Agriculture and Veterinary Sciences.
19. Intellectual Property Training Program for Eastern Africa, held 11th -29th June 2007, ICIPE Campus, Duduville, Nairobi, Kenya.
20. Scientific Writing Training Workshop: Proposals, Journal Publication & Communication, held 19th – 26th November 2006, KCB Training Centre, Nairobi
21. The Advanced Course on the Quality and Safety of Horticultural Crops, held 1st -23rd September 2006, Nanjing Agricultural University, China.
22. Student Management Information System (SMIS) Training, held 27 June 2006, Chiromo Campus.
23. Grantmanship and Regional Proposal Development Workshop (sponsored by ASARECA) at Hilton Hotel, Nairobi, Kenya, held 1st-4th June 2004
24. Summer Institute of African Agricultural Research, held 13th -25th June 1999, Madison, Wisconsin, USA.

i. SCHOLARSHIPS/FELLOWSHIPS/ACADEMIC RECOGNITION

1. Letter of Appreciation as Member of the Local Organizing Committee for the First All Africa Post-harvest Congress and Exhibitions, 2017

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2. Certificate of Acknowledgment by the Principal Secretary, State Department of Agriculture Research, for successfully organizing the Inaugural High Panel on Agricultural Research in Kenya, 13th to 14th September 2018
3. Letter of Appreciation by the Principal (CAVS) for facilitating the visitation by the members of the Pupil Reward Scheme (PURES) Mentorship Program on February 8, 2018
4. Commended by the Vice-Chancellor in the December 2011 graduation ceremony speech for graduating three PhD students in 2011.
5. Chinese Scholarship in September 1st -23rd, 2006
6. KARI recognition award for judging service at the 2006 Biennial KARI Conference
7. International Centre for development oriented Research in Agriculture (ICRA) Fellowship (The Netherlands)- January 2005 to June 2005
8. Canadian Commonwealth Fellowship (1998 to 2002)- Ph.D. studies at the University of Manitoba, Canada
9. Featured in the Canadian Society of Agronomy Newsletter of March 2001
10. Summer Institute of African Agricultural Research (SIAAR) Fellowship, by The Rockefeller Foundation tenable at University of Wisconsin, Madison, USA (1999).
11. University of Nairobi Scholarship (1990-1993) for M.Sc. studies
12. Ghandhi Smarak award for the Best Final Year undergraduate student (1990) in the Faculty of Agriculture, University of Nairobi.
13. Agricultural Development Corporation (ADC) award for Best Final Year undergraduate student (1990) in the Faculty of Agriculture, University of Nairobi.
14. Deans' list certificates in 2nd (1989) and 3rd yr (1990) of the B.Sc. Agriculture programme
15. Government of Kenya Undergraduate Scholarship (1987-1990) to undertake B.Sc. Agriculture programme at the University of Nairobi

j. DOCTOR OF PHILOSOPHY (PHD) STUDENTS SUPERVISED

Graduated:

1. Julius Pyton Serumuga. Genetics and molecular analysis of *Aspergillus* ear rot (aflatoxin) resistance in tropical maize. PhD Genetics and Plant Breeding, University

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- of Nairobi, Graduated September 2018. Supervisors: James Muthomi, **George N. Chemining'wa**, Asea (NARO-Uganda) and Dan Makumbi (CIMMYT)
2. Mary Mpinda Mutembei. Optimizing soil moisture through zero tillage and rice/chickpea relay intercropping system in Mwea, Kenya, PhD in Land and Water Management, Graduated in December 2017. Supervisors: Charles Gachene, **George Chemining'wa** and Anne Karuma
 3. Paul Anguria. Nutrient management options for enhancing sesame (*Sesame indicum* L.) seed yield and quality in north eastern Uganda, PhD Dryland Resource Management, graduated in September 2017. Supervisors: **George N. Chemining'wa**, Richard Onwonga and Michael Ugen (NARO-Uganda)
 4. Dan Odeny. Effect of *Cordia africana* (Lam) shade on physiology, yield and quality of Arabica coffee. PhD agronomy, graduated in December 2, 2016, University of Nairobi. Supervisors: **George N. Chemining'wa**, Solomon Shibairo and R.O. Nyankanga
 5. Gerald Kyalo. Exploring improved nutrient management options for increased rainfed lowland rice production in eastern and northern Uganda. Graduated with PhD in Agronomy, University, December 2, 2016. Supervisors: **George N. Chemining'wa**, Josiah M. Kinama and Frank Mussnug (International Rice Research Institute).
 6. James Biriha Ndiso. Enhancing productivity of maize–cowpea based cropping systems in coastal lowland Kenya through drought tolerant varieties and improved resource use. PhD agronomy, University of Nairobi. Graduated with PhD in Agronomy in 2015. Supervisors: **George N. Chemining'wa**, Florence Olubayo and Hemedi Saha (Pwani University).
 7. Jonathan Mutonyi. Management Strategies for potassium deficiency and low pH on sugarcane growth, yield and quality in Mumias sugar zone of western Kenya. Graduated with PhD Agronomy in 2014, University of Nairobi. Supervisors: Solomon Shibairo, **George N. Chemining'wa** and Florence Olubayo
 8. Jessica Ndubi. Partnership and division of labour in the making of clean planting materials. A technography of banana and Irish potato tissue culture engineering in the central highlands of Kenya. Graduated with PhD in Anthropology in 2015,

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Wageningen University, Netherlands. Supervisor: Sietze Vellema (Wageningen) and **George N. Chemining'wa** (local supervisor)

9. Peter Mwangi: Performance and influence of multipurpose legumes and their residues on maize performance in the cold semiarid areas: the case of Laikipia district, Kenya. Graduated with PhD Agronomy in 2011, University of Nairobi. Supervisors: **George N. Chemining'wa**, Mary Mburu (South East Kenya University) and Joseph Mureithi (Kenya Agricultural Research Institute)
10. Charles Lung'aho: Characterization and *in-vitro* conservation of potato (*Solanum tuberosum* L.) cultivars in Kenya. Graduated with PhD Agronomy in 2011, University of Nairobi. **George N. Chemining'wa**, Solomon Shibairo and Margaret J. Hutchinson
11. Abdul Kudra. Influence of soil fertility management on Striga reproduction and grain yield of sorghum in semi-arid areas of Tanzania. Graduated with PhD Dryland Resource Management in 2011, University of Nairobi. Supervisors: **G. N. Chemining'wa**, Kalunde Sibuga (Sokoine University of Agriculture) and Richard N. Onwong'a

Submitted/Waiting for defence:

12. Jonah Ngeno. Genetic diversity, abundance and nodulation efficiency of cowpea (*Vigna unguiculata* L.) rhizobia in south western Kenyan soils. Supervisors: **George N. Chemining'wa**, Solomon I. Shibairo and Margaret Hutchinson
13. Everlyne Kirwa. Selection and evaluation of ecotypes of potential range grass species for reseeded in southern eastern rangelands of Kenya. PhD Genetics and Plant Breeding. Supervisors: E.C.K. Ngugi, **George N. Chemining'wa** and Mnene (Kenya Agricultural Research Institute)

Writing:

14. Kaiira Moses Godfrey Bagiire. Allelopathic interactive effects of Nerica upland rice and medicinal plants. PhD Dryland Resource Management. Supervisors: **Prof. George N. Chemining'wa**, Dr. F.O. Ayuke and Dr. Baguma (NARO- Uganda)
15. John Muthamia. The influence of plant growth promoting rhizobacteria under high and low phosphorus on bean genotypes productivity in Central Kenya Highlands.

PhD Agronomy. Supervisors: Paul M. Kimani, **George N. Chemining'wa** and Anthony Esilaba (Kenya Agricultural Research Institute).

16. Charles Nkonge. Effect of zero tillage and residue retention on mycotoxin contamination in a maize-bean intercrop farming system. Maina Muiru, Douglas Miano and **George N. Chemining'wa**.
17. Wilson A. Oyange. Diversity of *Azolla* and its integration in paddy rice production systems in the Mwea irrigation scheme. **George N. Chemining'wa**, Kanya and Njiru (Embu University)

k. MASTER OF SCIENCE STUDENTS SUPERVISED

Graduated:

1. Caroline Chemutai: Effect of fertilizer application, harvesting method and moisture stress on growth, yield and nutritional quality of *Solanum nigrum* L. and *Vigna unguiculata* L. Walp". Graduated in September 2018 with M.Sc. Agronomy, UoN. Supervisors: **G.N. Chemining'wa** and J. Ambuko.
2. Constantin Dushimimana. Development of in vitro multiplication and acclimatization protocols for *Melia volkensii*. M.J. Hutchinson, **G.N. Chemining'wa** and T. Magomere
3. Hillary Otieno. Nutrient management options for enhancing productivity of maize and beans under conservation and conventional tillage systems. Graduated in December 2017 with MSc Agronomy, UoN. Supervisors: **G.N. Chemining'wa**, Charles Gachene and Shamie Zingore.
4. Agnes Munyitha: Effect of plant population, varieties and intermittent irrigation on growth and yield of rice in Mwea. Graduated in December 2017 with M.Sc. Agronomy, UoN. Supervisors: **G.N. Chemining'wa**, J. Kinama and Rosemary Muirori
5. Patrick Njeru. 2017. Analysis of public private partnerships in the provision of agricultural extension services: the case of greenhouse tomato farming in Samburu County, Kenya. Graduated in December 2017 with M.Sc. Agricultural Resource Management, UoN. Supervisors: Sabina Wangia-Makokha, **George N. Chemining'wa** and Dr. Kimpei Munei.

6. Yvonne A. Mutinda. 2017. Quality of farmer saved rice seed in Mwea Irrigation Scheme, effect of packaging materials and seed treatment on viability and vigour. M.Sc. Seed Technology and Business Management, Graduated in September 2017 UoN. J.W. Muthomi, **G.N. Chemining'wa** and J.M. Kimani.
7. R. Khaemba. Effect of soil water conservation practices on growth and yield of four cowpea varieties in Turkana South district. M.Sc. Agricultural Resource Management. Supervisors: Dr. Josiah M. Kinama and **George N. Chemining'wa**
8. E.W. Gathogo. Growth and yield performance of cabbage varieties under low and high input conditions in Manyatta Sub County, Embu County. Letter of award and to graduate with M.Sc. Agricultural Resource Management on December 02, 2016.. Supervisors: **Prof. G.N. Chemining'wa** and Dr. Jane Ambuko
9. Oduor Kenneth Tembe. Agro-morphological and nutritional characterization of tomato landraces (*Lycopersicon* species) in Africa. Letter of award and to graduate with M.Sc. Agronomy on December 02, 2016. Supervisors: **Prof. G.N. Chemining'wa**, Dr. J. Ambuko and Dr. W. Owino.
10. Sammy Lagat Morphological and agronomic characterization of the African eggplant. Letter of award and to graduate with M.Sc. Agronomy on December 02, 2016. Supervisors: **Prof. G.N. Chemining'wa**, Dr. J. Ambuko and Dr. W. Owino.
11. Naphis M. Bitange. Effect of varying rates of organic and inorganic fertilizers on growth, yield and nutrient use efficiency of clonal tea (*Camellia sinensis* L. [O] Kuntze. Letter of award and to graduate with M.Sc. Agronomy on December 02, 2016. Supervisors: **G.N. Chemining'wa**, R.O. Nyankanga and J. Ambuko.
12. Daniel W. Kiboi. Potential of combining tillage practices, trap crops and sticky traps for the management of the pea leaf miner (*Liriomyza huidobrensis*) in sugar snaps. Graduated with M.Sc. Crop Protection in September 2016. Supervisors Olubayo, Dora Kilalo and **George N. Chemining'wa**
13. Baroness N. Omwenga. Effect of integrated nutrient management and moisture conservation on growth, yield and quality of snap bean. Graduated with M.Sc. Agronomy in 2015, University of Nairobi. Supervisors: **George N. Chemining'wa**, J. Ambuko and J.H. Nderitu.

14. Eunice Wainaina. Evaluation of sweet potato varieties for beta carotene content. Graduated with M.Sc. Genetics and Plant Breeding in 2015, University of Nairobi. Supervisors: **George N. Chemining'wa** and Samuel Githiri (JKUAT)
 15. Irija Mwachia Almasi. Effect of organic and inorganic nitrogen sources on growth, seed and oil content of sunflower grown in highly weathered soils in Morogoro-Tanzania. Graduated with M.Sc. Agronomy in 2015, University of Nairobi. Supervisors: Josiah M. Kinama and **George N. Chemining'wa**
 16. Daniel O. Wasonga. Phenotypic, genetic and nutritional characterization of Kenyan and South African spider plant (*Cleome gynandra* L.) ecotypes. Graduated with M.Sc. Agronomy in 2014, University of Nairobi. **George N. Chemining'wa** and Dr. J. Ambuko
 17. Geoffrey Ongoya Wafula. Potential of potassium salts of fatty acids and integrated pest management strategies in the management of snap bean pest. Graduated with M.Sc. Crop Protection in 2014, University of Nairobi. Supervisors: James Muthomi, **George N. Chemining'wa** and J.H. Nderitu
 18. Jepngetich Kabutbei. Adaptation of Andean dry bean (*Phaseolus vulgaris* L.) genotypes to drought stress. Graduated with M.Sc. Agronomy in 2014, University of Nairobi. Supervisors: **George N. Chemining'wa**, P.M. Kimani, M. Mburu (South East Kenya University) and John H. Nderitu
 19. Evans Wanyama Wafula. Response of soybean (*Glycine Max* L.) to application of fertilizers, cattle manure and lime in western Kenya. Graduated with M.Sc. Agronomy in 2014, University of Nairobi. Supervisors: **George N. Chemining'wa**, Nancy Karanja and Shamie Zingore (International Plant Nutrition Institute).
 20. Damaris Wanjiru Mwangi. Characterization of maize doubled haploid and varietal hybrids under low-nitrogen and drought stress conditions. Graduated with M.Sc. Plant Breeding and Biotechnology in 2014, University of Nairobi. Supervisors: Kiarie Njoroge, **George N. Chemining'wa** and Dan Makumbi (CIMMYT)
- Submitted/defended:
21. Francis Khakata. Post-harvest evaluation of maize genotypes for resistance to aflatoxin contamination. M.Sc. Plant Breeding and Biotechnology, University of Nairobi. Supervisors: K. Njoroge, **G.N. Chemining'wa** and J. Harvey (Beca-ILRI).

22. Gladys Makaa Sammy. Effect of nitrogen rate and split application on growth and yield of rice in Mwea. M.Sc. Agronomy. Supervisors: **G.N. Chemining'wa**, J. Kinama and Rosemary Muirori
23. Sam Koile: Effect of nutrient management on yield and quality of cowpea and blacknight shade. M.Sc. Agronomy. Supervisors: **G.N. Chemining'wa** and J. Ambuko
24. Jedidah Chirchir. Genetic purity of rice seeds from different sources and their response to nitrogen fertilizer application. Supervisors: **George N. Chemining'wa**, Felister Nzuve and Rosemary Muirori (IRRI).
25. E. Magero. Effect of nutrient management on maize lethal necrosis disease severity in Kenya. Supervisors: **G.N. Chemining'wa**, Dora Kilalo and Felister Nzuve

Graduated before promotion to Associate Professor

26. Oliviah Odiyo. Phenotypic characterization of double haploid maize (*Zea mays* L.) tester-cross hybrids under drought and non-drought conditions. Graduate with M.Sc. Plant Breeding and Biotechnology in 2013, University of Nairobi. Supervisors: Kiarie Njoroge, **George N. Chemining'wa** and Yosek Beyenne
27. Philip Ogutu. Effect of integrated nutrient management on growth, yield and quality of canning navy bean. Defended and to graduate with M.Sc. Agronomy in 2013, University of Nairobi. Supervisors: **George N. Chemining'wa**, Prof John H. Nderitu and Dr. Josiah M. Kinama
28. Jackline Alufa: Drought tolerance mechanisms in Andean beans, M.Sc. Agronomy, University of Nairobi. Graduated with Master of Science in Agronomy in 2013: Supervisors: **George N. Chemining'wa**, Prof Paul M. Kimani, Prof Mary W. K. Mburu (South Eastern Kenya University) and Prof. John H. Nderitu
29. Idah K. Mugambi. The effect of lablab residues on bean root rot and performance of maize-bean intercrop. Graduated with M.Sc. Agricultural Resource Management in 2013, University of Nairobi. Supervisors: James Muthomi, **George N. Chemining'wa** and John H. Nderitu.
30. J.M.K. Macharia. Effect of Ratooning on yield and fibre quality of cotton varieties in eastern and central Kenya. Graduated with M.Sc. Agronomy in 2013, University of Nairobi. Supervisors: **George N. Chemining'wa** and Josiah M. Kinama

31. Jamlick Kamau Mwathi. Analysis of genetic variability for yield and grain quality characteristics of two –line F1 rice hybrids (*Oryza sativa* L.) newly developed for Kenya. Graduated with M.Sc. Plant Breeding and Biotechnology in 2013, University of Nairobi. Supervisors: Kiarie Njoroge and **George N. Chemining'wa**
32. Zinet Nezir Hassen. Food choice, consumption and its implication on nutritional status of mothers and children under five: The case of Addis Ababa City, Ethiopia. Graduated with M.Sc. Applied Human Nutrition in 2013. Supervisors: Kogi-Makau and **George N. Chemining'wa**.
33. Emma Apo Ouma. Levels of community participation and association with nutritional status of children beneficiaries aged 6-59 in nutrition programmes in Nairobi. Graduated with M.Sc. Applied human nutrition in 2013, University of Nairobi. Supervisors: Wambui Kogi-Makau and **George N. Chemining'wa**
34. Kamanu. J. Kariuki. Effect of inorganic nitrogen application regimes and *Rhizobium* inoculation on growth, yield and quality of snap bean varieties in central Kenya, Graduated with M.Sc. Agricultural Resource Management in 2012. Supervisors: **George N. Chemining'wa**, John H. Nderitu and Jane Ambuko
35. Rose Weru. Tolerance of maize varieties to infection by *Aspergillus flavus* and its management by use of antagonistic microorganisms. Graduated with M.Sc. Crop Protection in 2012, University of Nairobi. Supervisors: James Muthomi, **George N. Chemining'wa** and Eunice W. Mutitu
36. Muthoni E. Nkirigacha. Contribution of urban agriculture in food and nutrition security to the low income households of Kasarani district of Kenya. Graduated with M.Sc. Applied Human Nutrition in 2012, University of Nairobi. Supervisors: J.K. Imungi and **George N. Chemining'wa**.
37. Kaburu D. Mishek. Use of crop resistance and pesticides in the management of snap bean pests in Mwea. Graduated with M.Sc. Crop Protection in 2011, University of Nairobi. Supervisors: John H. Nderitu, **George N. Chemining'wa**, Florence Olubayo and Muo Kasina (Kenya Agricultural Research Institute).
38. Susan Wachira. Knowledge, usage of dietary supplements and dietary patterns of gym users in Nairobi. Graduated with M.Sc. Applied Nutrition in 2011, University of Nairobi. Supervisors: Alice Mwangi and **George N. Chemining'wa**

39. Florence Tom. Diversity of Storage insect pests in maize and susceptibility of maize varieties to maize weevil (*Sitophilus zeamais*). Graduated with M.Sc. Crop Protection in 2011, University of Nairobi. Supervisors: F.M. Olubayo, James W. Muthomi and **George N. Chemining'wa**
40. Hezekiah.O. Orwa. Smallholder utility-based bio-resource micronutrient diversity mapping at Lake Basin sites for enhanced nutraceutical-implied security. Graduated with M.Sc. Agricultural Resource Management in 2011, University of Nairobi. Supervisors: Levi S.M. Akundabweni and **George N. Chemining'wa**
41. Susan N. Gachanja. Combining ability and heterotic grouping of early maturing quality protein maize inbred lines. Graduated with M.Sc. Genetics and Plant Breeding in 2011. Supervisors: Kiarie Njoroge and **George N. Chemining'wa**
42. Jerono Cheserek. Development of drought tolerant varieties of maize with short anthesis to silking intervals in semiarid areas of Kenya. Graduated with M.Sc. Genetics and Plant Breeding in 2010, University of Nairobi. Supervisors: E. Ngugi and **George N, Chemining'wa**
43. Benson K. Mureithi. Fungal and mycotoxin contamination of maize in Kenya. Graduated with M.Sc. Crop Protection in 2010, University of Nairobi. Supervisors: James Muthomi, **George N. Chemining'wa** and E. Mutitu
44. Onesmus M. Kitonyo. Performance of maize varieties recommended for semiarid areas under an intercrop system with beans. Graduated with MSc. Agronomy, University of Nairobi in 2010. Supervisors: **George N. Chemining'wa** and James W. Muthomi
45. William M. Wanjiru. Effect of weed management practices and nitrogen application on seedling emergence, growth and yield of common bean. Graduated with MSc. Agronomy in 2010 , University of Nairobi. **George N. Chemining'wa** and Josiah M. Kinama.
46. Arthur Karugu Munyiri: Phenotypic screening for drought and stay green introgression in sorghum using marker assisted selection. Graduated with M.Sc. Genetics and Plant Breeding in 2010, University of Nairobi. Eluid K. Ngugi and **George N. Chemining'wa**

47. Anna Itwari Felix: Effect of organic manures and supplementary irrigation on growth, yield and micronutrient densities of dry bean. Graduated with M.Sc. Agronomy in 2009, University of Nairobi. Supervisors: **George N. Chemining'wa** and Paul M. Kimani
48. Peter Macharia: Effect of genotype, soil pH and rhizobia inoculation on root nodulation, growth and yield of garden pea (*Pisum sativum* L.). Graduated with M.Sc. Horticulture in 2009, University of Nairobi. Supervisors: **George N. Chemining'wa** and Richard Nyankanga
49. Wangechi Sarah Wagatwe: Influence of organic manures and watering regimes on growth, yield and quality of snap beans. Graduated with M.Sc. Agricultural Resource Management in 2009, University of Nairobi. Supervisors: **George N. Chemining'wa**, Charles C. K. Gachene and John H. Nderitu
50. Silvano Assanga Ocheya: Combining ability for yield in early quality protein maize under stress and non-stress conditions. Graduated with M.Sc. in Genetics and Plant Breeding in 2009, University of Nairobi. Supervisors: Samuel Githiri and **George N. Chemining'wa**.
51. Ngeno Jonah: The abundance and efficiency of garden pea nodulating rhizobia in central Kenya soils. Graduated with M.Sc. Agronomy in 2008, University of Nairobi. Supervisors: **George N. Chemining'wa**, James Muthomi and Solomon Shibairo
52. Esther Mwendu Muindi: Management of potato aphid transmitted viral diseases by integrating border crops, insecticides and mineral oil. Graduated with M.Sc. Agronomy in 2008, University of Nairobi. Supervisors: **George N. Chemining'wa**, James Muthomi, Florence Olubayo and John Nderitu
53. Lucy N. Njenga: Fungal and aflatoxin contamination in maize from eastern Kenya and evaluation of possible management strategies. Graduated with M.Sc. Agricultural Resource Management in 2008, University of Nairobi. Supervisors: James Muthomi, **G.N. Chemining'wa** and James Gathumbi.
54. Patrick King'uru Wahome: The importance and performance of food grain legumes among smallholder farmers in Machakos district. Graduated with M.Sc. Agricultural

- Resource Management in 2008, University of Nairobi. Supervisors: James Muthomi and **George N. Chemining'wa**
55. Esther Gachango. Effect of storage conditions on quality and storability of seed ware potato. Graduated with M.Sc. Horticulture in 2007, University of Nairobi. Supervisors: Solomon I. Shibairo and **George N. Chemining'wa**.
56. Patrick Otieno. Effect of chemical pesticides and nitrogen source on the performance of food grain legumes. Graduated with M.Sc. Agricultural Resource Management in 2007, University of Nairobi. Supervisors: James W. Muthomi, **George N. Chemining'wa** and John H. Nderitu
57. S.W.M. Theuri: Effect of rhizobia inoculation and starter-nitrogen application on nodulation, biomass and grain yield of legumes. Graduated with M.Sc. Agricultural Resource Management in 2007, University of Nairobi. Supervisors: **George N. Chemining'wa** and James W. Muthomi
58. Stella Obanyi. Effect of potassium application on growth, yield and quality of kale in Kenya. Graduated with M.Sc. Horticulture in 2006, University of Nairobi. Supervisors: Solomon I. Shibairo and **George N. Chemining'wa**
59. Jonathan Mutonyi: Performance evaluation of high quality zero grazing annual clovers grown with sudan grass (*Sorghum sudanense*) and finger millet (*Eleusine coracana*) at Kabete, Kenya. Graduated with M.Sc. Agronomy in 2006, University of Nairobi. Supervisors: Levi Akundabweni and **George N. Chemining'wa**

Writing

60. Benjamin Onyancha Ndemo. Evaluation of new snap bean lines for pod quality, shelf life and yield potential. M.Sc. Agronomy, University of Nairobi. P.M. Kimani, C. M. Onyango and **G.N. Chemining'wa**
61. Miriam W. Wainaina. Effect of tied ridges on growth and yield of maize, sorghum and dry beans under different agronomic management practices. M.Sc. Agronomy, University of Nairobi. **George N. Chemining'wa**, Antony Esilaba (KARI) and K.P.C. Rao (ICRISAT).

62. Haron Goro. Effect of integrated crop management on yield and pesticide residues in snap beans in eastern Kenya. M.Sc. Horticulture. R.O. Nyankanga, **George N. Chemining'wa** and P.M. Kimani.
63. Rahab Magoti. Effect of soil type and moisture stress on selected rice varieties. M.Sc. Agronomy. Supervisors: **George N. Chemining'wa** and J.M. Kinama
64. Stellamaris L. Mulika. Effect of plant spacing and rhizobial inoculation on growth, nodulation and yield of selected greengram varieties in lower eastern Kenya. Supervisors: M.Sc. Agronomy. Supervisors: **George N. Chemining'wa** and J.M. Kinama
65. Jane Masambia. Effect of organic and inorganic fertilizers on growth and yield of *Crotalaria* species. MSc Agronomy, University of Nairobi. Supervisors: **George N. Chemining'wa** and J. Ambuko

Research stage:

66. Gathika Peter Mungai. Effect of plant spacing and mulching on growth, yield and quality of *Stevia rebaudiana* in central Kenya. M.Sc. Agronomy. Supervisors: **George N. Chemining'wa** and Jane Ambuko
67. Martin Waiti. Effect of water stress and nitrogen nutrition on growth, yield and quality of egg plant. **George N. Chemining'wa**, J. Ambuko and Willis Owino
68. Moi E. Effect of cropping system and fertilizer application on agronomic performance of sorghum and cowpea. **George N. Chemining'wa**, Josiah M. Kinama and Onesmus M. Kitonyo
69. Karama E. Effect of liming, farmyard manure and inorganic fertilizers on growth, nodulation and yield of dry bean. **George N. Chemining'wa**, J.W. Muthomi and Susan
70. Enock Mosenda. Effect of water stress on growth, yield and quality of spider plant. **George N. Chemining'wa**, J. Ambuko and W. Owino.
71. Aryemo Sunday Ocaya. Effect of spatial arrangement and time of planting sorghum and legume cover crops in an intercrop system on yields and control of *Striga* in Kenya. **George N. Chemining'wa**, Josiah M. Kinama and Onesmus Kitonyo

I. SELECTED UNDERGRADUATE STUDENTS SUPERVISED- B.SC. AGRICULTURE (CROP SCIENCE) MAJOR SPECIAL PROJECTS

1. Kipkurui Erick Ruttoh. 2013. Effect of pesticides and variety on grain yield losses in dry bean due to infestation by weevils
2. Chemutai Caroline. 2013. Effect of compound fertilizers on inorganic fertilizers on growth and yield of dry bean.
3. Koile Sam. 2013. Effect of fertilizers on growth and yield of “Njahi” (*Dolichos lablab*) Agronomy
4. Basil O. Otieno. 2013. Nitrogen accumulation by soybean in soils from western Kenya
5. Hilary Omondi. Effect of liming and fertilizer application on growth and yield of soybean.2013.
6. Odhiambo Kennedy Omondi. An evaluation of canopy radiation interception and ground cover in sorghum. 2012
7. Edward Kimani Chege. Effect of time of application of nitrogen fertilizer on nodulation and grain yield of garden pea. 2012.
8. Maureen N. Situma. Effect of green manure on vegetative growth, yield and nutritional quality of *Solanum villosum* and *Vigna Unguiculata* African leafy vegetables, 2007
9. Silvano Assanga Ocheya. Growth, nodulation and yield of chickpea. 2005.
10. Eunice Wainaina. Effects of intercropping maize and beans on nodulation, dry matter accumulation and soil moisture at various stages of growth. 2004.
11. Francis M. Mwangi. Rose cutflower treatment with silver thiosulphate to increase vase life. 2004.
12. C.G. Ngazi. Response of cowpea to varied levels of nitrogen application. 2004
13. Zebedee Osundwa. Effect of nitrogen fertilizer on bean growth, nodulation and yield. 2004.
14. C.M. Ndwigwa C.M. Effect of nitrogen source on growth and yield of Kale. 2003.
15. Lilian N. Gichuru. Water use efficiency in chickpea. 2003.
16. O.M. Oiro. Light interception, water use efficiency and dry matter accumulation in chickpea. 2003.

17. Manasseh A. Nechenje. Effects of rhizobial inoculation on growth and yield of potato and bean in an intercrop system. 2003.
18. Amos M. Gathua. Effect of polythene bag storage and temperature on the storage life of three banana varieties, 2003.
19. D.K. Tatkei. Effect of bean population on growth and yield of potato intercropped with beans in the same hill. 2002.

m. ACADEMIC PUBLICATIONS

1. J.K. Ngeno, **G.N. Chemining'wa** and M.J. Hutchinson. 2018. Symbiotic efficiency of commercial and native rhizobia of cowpea (*Vigna unguiculata* L.) in south western Kenya. Asian Journal of Advances in Agricultural Research, 2018: 1-16
2. J. B. Ndiso, **G. N. Chemining'wa**, F. M. Olubayo and H. M. Saha. 2018. Effect of cowpea crop residue management on soil moisture content, canopy temperature, growth and yield of maize - cowpea intercrops. International Journal of Agriculture, Environment and BioResearch 3 (05): 231-250.
3. Khakata S., Nzuve F. M., **Chemining'wa G. N.**, Mwimali M., Karanja J., Harvey J. and Mwololo J. K. 2018. Post-harvest evaluation of selected hybrids to maize weevil *Sitophilus zeamais* resistance. Journal of Stored Products and Postharvest Research 9(3): 16-26
4. **G. N. Chemining'wa**, J. K. Ngeno, M. J. Hutchinson and S. I. Shibairo. 2018. Influence of P fertiliser on nodulation, growth and nutrient content of cowpea (*Vigna unguiculata* L.) in acidic soils of south western Kenya. International Journal of Plant & Soil Science (IJPSS.44765) 2018: 1-12
5. Khakata S., Mbute F. N., **Chemining'wa G. N.**, Mwimali M., Karanja J., Harvey J. and Mwololo J. K. 2018. Post-harvest evaluation of selected inbred lines to maize weevil *Sitophilus zeamais*. Journal of Plant Breeding and Crop Science 10(5): 105-114
6. Catherine Kunyanga, Joshua Amimo, Lucy Kingori Njue, and **George Chemining'wa**. 2018. Consumer risk exposure to chemical and microbial hazards through consumption of fruits and vegetables in Kenya. Food Science and Quality Management: 78: 59- 69

7. Hillary M. O. Otieno, **George N. Chemining'wa** & Shamie Zingore. 2018. Effect of farmyard manure, lime and inorganic fertilizer applications on soil ph, nutrients uptake, growth and nodulation of soybean in acid soils of Western Kenya. *Journal of Agricultural Science* 10: 199-208.
8. James Wanjohi Muthomi, Geoffrey Ongoya Wafula, John Huria Nderitu, **George Ndiema Chemining'wa**. 2018. Integration of seed dressing, biopesticides and intercropping to reduce pesticide use in snap bean production. *International Journal of Agricultural Sciences and Natural Resources*. 5 (1): 12-20.
9. J. B. Ndiso, **G. N. Chemining'wa**, F. M. Olubayo and H. M. Saha. 2018. Effect of N-fertilizer application on soil moisture content, canopy temperature, growth and yield maize - cowpea intercrops. *Journal of Advanced Studies in agricultural, Biological and Environmental Sciences (JABE)*. 5: 62-78.
10. Susan G. Njeri, Dan Makumbi, Marylyn L. Warburton, Alpha Diallo, MacDonal B. Jumbo and **George Chemining'wa**. 2017. Genetic analysis of tropical quality protein maize (*Zea mays* L.) germplasm. *Euphytica* (2017) 213: 261 (1-19).
11. Ambuko, F Wanjiru, **GN Chemining'wa**, and WO Owino. Preservation of postharvest quality of leafy amaranth (*amaranthus* spp.) vegetables using evaporative cooling. *Journal of Food Quality*. Volume 2017, Article ID 5303156, 6 pages; <https://doi.org/10.1155/2017/5303156>
12. Ambuko Jane, Florence Wanjiru, Esther Karithi, Margaret Hutchinson, **George Chemining'wa**, Eliakim Mwachoni Britta Hansen, Lusike Wasilwa, Willis Owino and Ngoni Nenguwo. Cold chain management in horticultural crops value chains: options for smallholder farmers in Africa. *Acta Horticulturae*, 2017
13. Kenneth O. Tembe, **George N. Chemining'wa**, Jane Ambuko, Willis Owino. 2017. Effect of water stress on yield and physiological traits among selected African tomato (***Solanum lycopersicum***) land races. *International Journal of Agronomy and Agricultural Research (IJAAR)* 10 2):78-85.
14. Ndiso J. B., **Chemining'wa G. N.**, Olubayo F. M. and Saha H. M. 2017. Effect of cropping system on soil moisture content, canopy temperature, growth and yield performance of maize and cowpea. *International Journal of Agricultural Sciences* 7 (3): 1271-1281

15. Ndiso J. B., **Chemining'wa G. N.**, Olubayo F. M. and Saha H. M. 2017. Effects of variety and insecticide spray application on pest damage and yield of cowpea. *International Journal of Agricultural Sciences*. 7 (2): 1248-1257
16. Mutembei MM, Gachene CKK, **Chemining'wa GN** and Karuma AN. 2017. Tillage and relay intercropping effect on yield and yield components of upland rice. *Journal of Agricultural Science and Food Technology* Vol. 3 (4): 64-77
17. A. K. Munyithya, R. Murori, **G. N. Chemining'wa** and J. Kinama. 2017. Transplanting, plant spacing and water management practices by paddy rice farmers in Mwea irrigation scheme. *International Journal of Agronomy and Agricultural Research (IJAAR)* 11(2): 69-76
18. Geoffrey Ongoya Wafula, James W. Muthomi, John H. Nderitu & **George N. Chemining'wa**. 2017. Efficacy of potassium salts of fatty acids in the management of thrips and whitefly on snap beans. *Sustainable Agriculture Research* 6 (4): 45-54
19. A. K. Munyithya, R. Murori, **G. N. Chemining'wa** and J. Kinama. 2017. Effect of plant spacing and intermittent flooding on growth and yield of selected lowland rice varieties in Kenya. *International Journal of Agronomy and Agricultural Research (IJAAR)* 11(1): 123-130
20. Mutembei MM, Gachene CKK, **Chemining'wa GN** and Karuma AN. Farmers' perceptions, exposure and response to climate variability in Mwea, Kenya. *Journal of Agricultural Science and Food Technology* 3 (2): 29-38, 2017
21. Paul Anguria, **George N. Chemining'wa**, Richard N. Onwonga & Michael A.Ugen. 2017. Effects of Organic Residues on Soil Properties and Sesame Water Use Efficiency. *Journal of Agricultural Science*; Vol. 9, No. 5:1-10; 2017.
22. Paul Anguria, **George N. Chemining'wa**, Richard N. Onwonga and Michael A. Ugen. 2017. Decomposition and Nutrient Release of Selected Cereal and Legume Crop Residues. *Journal of Agricultural Science*; Vol. 9, No. 6: 1-12
23. R. N. Khaemba, J. M. Kinama and **G. N. Chemining'wa**. 2017. Effect of Tillage Practice on Soil Moisture Retention under Three Selected Cowpea Varieties. 16(5): 1-5
24. R.N. Khaemba, J.M. Kinama and **G. N. Chemining'wa**. 2016. Effect of tillage practice on growth and yield of three selected cowpea varieties. *Journal of Experimental Agriculture International* 14(3): 1-11.

25. Yvonne A. Mutinda, James W. Muthomi, John M. Kimani, **George N. Cheminig'wa**, Florence M. Olubayo. Viability and dormancy of rice seeds after storage and pre-treatment with dry heat and chemical agents. *Journal of Agricultural Science*, 9 (7): 175-185.
26. M. Otim, M. Kasina, J. Nderitu, M. Katafiire, M. Mcharo, M. Kaburu, G. Bwire, **G. Chemining'wa**, F. Olubayo and M. Ugen. 2017. Effectiveness and profitability of insecticide formulations used for managing snap bean pests. *Uganda Journal of Agricultural Sciences*, 2016, 17 (1): 111 - 124
27. E.C. Kirwa, K. Njoroge, **G.N. Chemining'wa** and W. N. Mnene. 2016. Ecological effects on the flowering phenology of *Cenchrus ciliaris* L. collections from the arid and semiarid lands of Kenya. *African Journal of Agricultural Research* 11(12): 1008-1018.
28. J. B. Ndiso, **G. N. Chemining'wa**, F. M. Olubayo and H. M. Saha 2016. Participatory selection of cowpea varieties in Kilifi County of Kenya. *International Journal of Plant & Soil Science* 9(2): 1-10.
29. J. B. Ndiso, **G. N. Chemining'wa**, F. M. Olubayo and H. M. Saha 2016. Effect of drought stress on canopy temperature, growth and yield performance of cowpea varieties. *International Journal of Plant & Soil Science* 9(3): 1-12
30. Danstan Odeny, **G. Chemining'wa**, Solomon Shibairo and C. Kathurima. 2015. Sensory attributes of coffee under different shade regimes and levels of management. *Food Science and Quality Management* 46: 19-26
31. Kirwa E C, Njoroge K, **Chemining'wa G.** and Mnene W N 2015: Nutritive composition of *Eragrostis superba* Peyr and *Cenchrus ciliaris* L. collections from the ASALs of Kenya. *Livestock Research for Rural Development*. Volume 27, Article #144. Retrieved November 8, 2015, from <http://www.lrrd.org/lrrd27/8/kirw27144.html>
32. Julius P. Sserumaga, Dan Makumbi, Lee Simyung, Kiarie Njoroge, James W. Muthomi, **George N. Chemining'wa**, Godfrey Asea, Moses Waswa and Daniel K. Bomet. 2015. Incidence and severity of potentially toxigenic *Aspergillus flavus* in maize (*Zea mays* L.) from different major growing regions of Uganda. *African Journal of Agricultural Research* 10(11): 1244-1250.

33. D.O. Wasonga, J.L. Ambuko, **G.N. Chemining'wa**, D.A. Odeny and B.G. Crampton. 2015. Morphological Characterization and Selection of Spider Plant (*Cleome gynandra*) Accessions from Kenya and South Africa. *Asian Journal of Agricultural Sciences* 7(4): 36-44.
34. Julius P Sserumaga, Dan Makumbi, Hyeonso Ji, Kiarie Njoroge, James Wanjohi Muthomi, **George N Chemining'wa**, Lee Si-myung, Godfrey Asea and Hakbum Kim. 2014. Molecular characterization of tropical maize inbred lines using microsatellite DNA markers. *Maydica* 59: 267-274
35. **Chemining'wa G.N.**, Kitonyo O.M. and JH Nderitu. 2014. Status, challenges and marketing opportunities for canning navy bean in Kenya. *African Journal of Food, Agriculture, Nutrition and Development* 14(5): 9272-9287.
36. Olivia Odiyo, Kiarie Njoroge, **George Chemining'wa** and Yoseph Beyene. 2014. Performance and adaptability of doubled haploid maize testcross hybrids under drought stress and non-stress conditions. *International Research Journal of Agricultural Science and Soil Science* 4(8): 150-158.
37. Shibairo Igosangwa Solomon, **Chemining'wa George Ndiema** and Mutonyi Jonathan. 2014. Effects of agricultural lime and phosphorus application to sugarcane (*Saccharum officinarum* L.) growth, yield and quality. *International Journal of AgriScience* 4(11): 490-498.
38. Muthomi, J. W., Mugambi, I. K., Ojiem, J., **Chemining'wa, G. N.** and Nderitu, J. H. 2014. Effect of incorporating lablab biomass in soils on root rot disease complex and yield of beans intercropped with maize. *International Journal of AgriScience* 4(12): 515-524.
39. Mutonyi J, Shibairo S.I, **Chemining'wa G.N**, Olubayo F.M, Keya N.C.O and Nyongesa, H.W, Konje Martha. 2014. Sugarcane response to liming, manuring and inorganic fertilizers on acid acrisols in western Kenya. *International Journal of Recent Scientific Research* 5 (9): 1703-1707
40. Mutonyi, J, Shibairo S.I, **Chemining'wa, G.N**, Olubayo, F.O., Nyongesa, H.W and Konje, M. M. 2014. Effects of N and K fertilization of sugarcane (*Saccharum officinarum*) on acrisols in western Kenya. *Elixir Agriculture* 67 (2014): 21669-21675.

41. Kudra, A, **Chemining'wa G. N** and Sibuga K. P. 2014. *Striga asiatica* growth and seed production in response to organic and inorganic P – fertilizers. Access International Journal of Agricultural Science. 2(1):6-12
42. Julius P Sserumaga, Dan Makumbi, Hyeonso Ji, Kiarie Njoroge, James Wanjohi Muthomi, **George N Chemining'wa**, Lee Si-myung, Godfrey Asea and Hakbum Kim. 2014. Molecular characterization of tropical maize inbred lines using microsatellite DNA markers. *Maydica* 59: 267-274
43. A Kudra, **G.N. Chemining'wa**, RN Onwonga, KP Sibuga. Influence of fertilizers on *Striga Asiatica* reproduction and sorghum grain yield in Dodoma, Tanzania. 2014. *East African Agricultural and Forestry Journal* 80 (issue 3): 149-156.

Papers published before promotion to Associate Professor

44. F. K. Tom, J. W. Muthomi, F. M. Olubayo, and **G. N. Chemining'wa**. 2013. Resistance of locally grown maize genotypes to infestation by maize weevil (*Sitophilus zeamais* Motsch.). *East African Agricultural and Forestry Journal* 78 (4): 257-265.
45. J. W. Muthomi, R. W. Weru, **G. N. Chemining'wa** and E. W. Mutitu. 2013. Tolerance of maize varieties to infection by *Aspergillus flavus* and aflatoxin accumulation. *East East African Agricultural and Forestry Journal* 78 (1): 113-118.
46. Mureithi, B. K., Muthomi, J. W., **Chemining'wa, G. N.** and Mutitu, E. W. 2013. Identification of predisposing factors to aflatoxin contamination of maize value chain in eastern Kenya. *East African Agricultural and Forestry Journal* 78(4): 217-226
47. **Chemining'wa, G. N.**, P.W. Mwangi, M.W. K. Mburu and J. G. Mureithi. 2013. Nitrogen fixation potential and residual effects of selected grain legumes in a Kenyan soil. 3 (2):14-20
48. Mwangi, P.W., **G.N. Chemining'wa**, M. W. K. Mburu, J. G. Mureithi. 2013. Decomposition and nutrient release rates of selected legume residues in a cold semiarid environment of Kenya. *International Journal of Agronomy and Agricultural Research* 3 (2): 1-13, 2013.

49. Ngugi, K., J. Cheserek, Muchira S., and **G.N. Chemining'wa** 2013. Anthesis to Silking Interval Usefulness in Developing Drought. *Journal of Renewable Agriculture* 1(5): 84-90
50. Kitonyo O.M., **G.N. Chemining'wa** and J.W. Muthomi. 2013. Productivity of farmer-preferred maize varieties intercropped with beans in semi-arid Kenya. *International Journal of Agronomy and Agricultural Research*. 3 (1): 6-16
51. Kudra Abdul, **G. N. Chemining'wa** and Richard N. Onwonga. 2012. Relationships between agronomic practices, soil chemical characteristics and Striga reproduction in dryland areas of Tanzania. *Journal of Agricultural Science and Technology A* 2 (2012): 1134-1141
52. **Chemining'wa G. N.**, Ngeno J., Muthomi J. W. and Shibairo S.I. 2012. Effectiveness of indigenous pea rhizobia (*Rhizobium leguminosarum* bv. *viciae*) in cultivated soils of Central Kenya. *Journal of Applied Biosciences* 57: 4177– 4185
53. C. Lung'aho, **G. Chemining'wa**, S. Shibairo and M. Hutchinson. 2012. Dynamics of on-farm management of potato (*Solanum tuberosum*) cultivars in Central Kenya. *African Journal of Agricultural Research* 7(17): 2701-2712,
54. Ngeno J., **Chemining'wa G. N.**, Muthomi J. W. and Shibairo S. 2012. Effect of Rhizobium inoculation and nitrogen fertilizer application on growth, nodulation and yield of two garden pea genotypes. *Journal of Animal and Plant Sciences* 15: 2147-2156.
55. Kamanu J.K., **Chemining'wa G.N.**, Nderitu J.H and Ambuko, J. 2012. Growth, yield and quality response of snap bean (*Phaseolus vulgaris* L.) plants to different inorganic fertilizers applications in central Kenya.55:3944 – 3952
56. Muthomi J. W., Mureithi B. K., **Chemining'wa G. N.**, Gathumbi J. K., Mutitu E. W. 2012. Aspergillus species and Aflatoxin b1 in soil, maize grain and flour samples from semi-arid and humid regions of Kenya. *International Journal of AgriScience* 2(1): 22-3
57. **Chemining'wa, G.N.**, Theuri, S.M. and J. W. Muthomi. 2011. The abundance of indigenous rhizobia nodulating cowpea and common bean in central Kenyan soils. *African Journal of Horticultural Science* 5:92-97

58. C. Lung'aho, **G.N. Chemining'wa**, S. I. Shibairo, M. J. Hutchinson, H. G. and M. Mbiu. 2012. Cost effective slow growth in vitro conservation of potato (*Solanum tuberosum* L.) using table sugar as an alternative carbon source. *African Journal of Biotechnology*: 11 (5): 1092-1099.
59. Lung'aho, **G.N. Chemining'wa**, Y. Fu, S. I. Shibairo, M. J. Hutchinson and H. G. Paniagua. 2011. Genetic diversity of Kenyan potato germplasm revealed by simple sequence repeat markers. *American Journal of Potato Research* 88:424–434
60. J.W. Muthomi, L.N. Njenga, J.K. Gathumbi and **G.N. Chemining'wa**. 2009. The occurrence of aflatoxins in maize and distribution of mycotoxin-producing fungi in eastern Kenya. *Plant Pathology Journal* 8(3): 113-119
61. P.E. Otieno, J.W. Muthomi, **G.N. Chemining'wa** and J.H. Nderitu. 2009. Effect of rhizobia inoculation, farm yard manure and nitrogen fertilizer on nodulation and yield of food grain legumes. *Journal of Biological Sciences* 9: 326-332
62. Muindi, E.M., Muthomi, J.M., Nderitu, J.H., Olubayo, F.M., Kabira, J. N., **Chemining'wa, G. N.** Kiretai, S. M. and Aura, J. A. 2009. Use of cereal border crops in the management of aphid – Transmitted viral diseases during seed potato (*Solanum tuberosum*) production. *African Journal of Horticultural Science* 2:69 – 78
63. Esther Gachango, Solomon I. Shibairo, Jackson N. Kabira, **George N. Chemining'wa** and Paul Demo. Effects of light intensity on quality of potato seed tubers. *African Journal of Agricultural Research* Vol. 3 (10): 732-739.
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5. SUCAPRI Team. April 2008. The initial Planning phase and project implementation: Report on activity one of Strengthening of University Capacity for promoting, facilitating and teaching rural innovation, 44 pages.
6. **G. Chemining'wa**, I. Mulagoli, S. Mwonga, Ndubi, J., Tum J., and G. Turyamureeba. 2005. A study to develop strategies to exploit market opportunities for apple farmers in Kabale, Uganda. ICRA Working Document Series 125 Uganda-2005-09-01
7. **ICRA, 2005**. Ware potato market chain: constraints and opportunities in light of changing consumer demands (Participated in writing it with ICRA participants from three different countries)
8. **G. N. Chemining'wa**, J.W. Muthomi and E.O. Obudho. 2004. Effect of rhizobia inoculation and urea application on nodulation and dry matter accumulation of green manure legumes at Katumani and Kabete sites, Kenya. Legume Research Network Project Newsletter 11:13-17
9. **G.N. Chemining'wa**, Mustafa, K.N. and J.O. Nyabundi, 2003. Inoculation of beans with rhizobia can improve productivity of maize-bean intercrops. Legume Research Network Project Newsletter (KARI). 9: 11-13
10. **George N. Chemining'wa**, J. Kevin Vessey, and Bert Luit. 2000. The abundance and diversity of *Rhizobium leguminosarum* bv. *viciae* populations in southern Manitoba

soils Abstract and poster (Ninth Association of African Congress on Nitrogen Fixation (2000), Nairobi, Kenya).

11. **George N. Chemining'wa** and J. Kevin Vessey. 2001. The abundance, efficiency, and genetic diversity of *Rhizobium Leguminosarum* bv. *viciae* populations in soils of southern Manitoba. Abstract in the 13th Congress on nitrogen fixation, 2001, Hamilton, Ontario, Canada

Manuals

1. Advanced plant physiology and metabolism manual for M.Sc. Agronomy, Horticulture and Plant Breeding & Biotechnology instruction, 2012.

Dissertations/theses authored

1. The abundance and diversity of *Rhizobium leguminosarum* bv. *viciae* populations in southern Manitoba soils. PhD Thesis, University of Manitoba, 2002
2. Effect of increased intimacy between maize and beans in an intercrop system on growth and yield of maize under varying nitrogen levels. M.Sc. Thesis, University of Nairobi, 1993.

n. SELECTED CONFERENCES/CONGRESSES/SYMPOSIA/SEMINARS AND PROFESSIONAL MEETINGS ATTENDED

1. The Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26 October 2018, KICC, Nairobi, Kenya
2. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 29th October 2018, Mayfair Hotel, Nairobi, Kenya
3. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 20th February to 31st March 2017, Mayfair Hotel, Nairobi Kenya
4. Expert Meeting on neglected and underutilized species (NUS) value chains in Sub-Saharan Africa, 29 November 2016, Cotonou, Benin
5. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2016, Mayfair Hotel, Nairobi, Kenya

6. Kenya National Field School Sharing Platform on 5th to 7th October 2016. Jumuia Conference and Resort Centre, Nakuru, Kenya
7. International Phytosanitary Conference, KEPHIS headquarters, Karen. 12- 16th September 2016
8. Neglected and Underutilized species workshop and exhibition on 28th to 30th September 2016, CAVS and Ngong hills hotel, Nairobi
9. Future Earth Research for Global Sustainability on 25th May 2016. APHRC Campus, Nairobi
10. Capacity building in plant breeding and Seed Technology for Improved Food and Nutritional Security in Eastern Africa - AGRA students thesis research progress report seminar, CAVS, Nairobi, 18th March 2016
11. Agra Capacity Building Workshop on 22nd January 2016, CHAK Guest House, Nairobi Kenya
12. Stakeholder Workshop on a Proposed Syllabus in MSc Biosafety on 7th December 2015, KALRO Headquarters, Nairobi
13. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2015, Mayfair Hotel, Nairobi Kenya
14. Kenya Orcid Workshop on 23rd July 2015, Confucius Centre – University Nairobi
15. Development of a Master of Biosafety degree programme workshop from 15th to 16th June 2015, University of Ghana, Ghana
16. Mango processing consultative workshop on 5th June 2015, CAVS, UoN, Nairobi
17. A two-day Kenya Forum for Agricultural Advisory Service workshop and launch held May 20-22, 2015, Green Hills Hotel, Nyeri, Kenya
18. SEMIs Curriculum Review Workshop on 2nd to 6th July 2014, Great Rift Lodge, Naivasha
19. Attended agriculture Symposium 2013 on- Kenya-Australia Partnerships: Australia Awards Post-harvest Experience held on 29th October 2013, Laico Regency, Nairobi, Kenya.
20. Sensitization Workshop on Ethics and Research Conduct held on 20 November 2013, Central Catering Unit (CCU), University of Nairobi.

21. CGIAR Consortium Capacity Development Community of Practice workshop held on 21-25 October 2013, ILRI Campus, Nairobi
22. Attended a series of Rapid Results Initiative (RRI) public lectures and activities at university and college level between August and November 2013; including the official launch of 100-day RRI programme on the sensitization of staff on the Constitution of Kenya (2010) and the Public Service Integrity Programme held on Monday, August 12, 2013, Taifa Hall, Main Campus, University of Nairobi.
23. Wetlands in East Africa: reconciling future food production with environment protection, Dar-Es- Salaam, Tanzania, 7th to 9th September 2013
24. Joint meeting for Monitoring and Evaluation of Aflatoxin trials, NARO-NaCRRRI – KAFACI Project, Uganda, 29th July 2013 to 2nd August 2013
25. The Regional workshop on Synthesis of Snap Bean Technologies, Validation Protocols, M&E, Capacity Building Needs and Communication and Management Strategy for the ASARECA sponsored Snapbean Integrated Crop Management Project, All Africa Conference of Churches – Bishop Desmond Tutu Centre, Nairobi, Kenya. 24th to 26th April 2013.
26. The Inception Workshop of the ASARECA sponsored Snapbean breeding and integrated crop management projects, All Africa Conference of Churches – Bishop Desmond Tutu Centre, Nairobi, Kenya. 22nd to 23rd April 2013.
27. Automated Monitoring, Evaluation and Reporting (MERC) System Training in Entebbe, Uganda from April 2-3, 2013 sponsored by ASARECA.
28. Training on baseline data collection and analysis for new projects 18-22 March 2013, Nairobi, Kenya. Sponsored by ASARECA
29. Training on environmental and social safeguards training, 5th to 8th March, Sports view hotel, Kigali, Rwanda. Sponsored by ASARECA.
30. Training on Agricultural Innovation systems and value chain development approach for research. 25th February to 1st March 2013, Hilton Hotel, Nairobi, sponsored by ASARECA.
31. FP7 Training under BIOCIRCLE in Accra, Ghana, 22nd to 23rd October 2012.
32. Workshop for Development of full ASARECA proposal for the Staple crops project held on 29th October to 2nd November 2012, Mukono, Uganda,

33. Stakeholder curriculum review workshop Egerton University, October 2012
34. Ruforum Conference held on 20-24 September, 2012, Entebbe, Uganda
35. Review and planning meeting for the Temperate Rice Research Consortium, held on 17-19th September 2012, Trakya Agricultural Research Institute, Edirne, Turkey.
36. ASARECA –HVNSC Consultative workshop held on April 11-1^{2th} 2012 at the Hilton Hotel in Nairobi, Kenya
37. Consultative workshop for review of content for SEMIs, held 19th -21st March 2012, Kenya School of Monetary Studies, Nairobi
38. International Conference for Youth in Africa 2012, held 9th -10th March 2012, College of Agriculture and Veterinary Sciences (CAVS)- University of Nairobi
39. Attended the first ASARECA General Assembly, held at Imperial Resort Hotel, Entebbe, Uganda on 14th – 16th December 2011
40. Presented at the Agro2011 Biennial Conference held 26-28 September 2011 at the College of Agriculture and Veterinary Sciences, University of Nairobi
41. End of Snap Bean Project Workshop held on 9-10th August 2011 at the Agricultural Information Resource Centre-KARI, NARL Nairobi. Sponsored by ASARECA
42. Agricultural value chain development curriculum development workshop, supported by GTZ. 27th June 2011 at the NARL-KARI, Nairobi.
43. 12th KARI Biennial Scientific Conference held 8-12 November 2010, KARI Headquarters Complex, Kaptakat Road, Loresho, Nairobi, Kenya.
44. Second Regional Biennial conference on building capacity for improved food and livelihood security in Africa held 20-24th September 2010, Imperial Resort Hotel, Entebbe, Uganda
45. Development of Performance Monitoring Plans (PMP) for Snap beans project- HVNSC Programme, 1st July – 4th July 2010, Nairobi Kenya.
46. Snap bean stakeholder workshop 9th -10th December 2009, Entebbe, Uganda
47. Snap Beans Commodity Value Chain Stakeholders Workshop held on 9-10 December 2009, at the Imperial Resort Beach Hotel, Entebbe.
48. Priority Setting Workshop – ASARECA; 13th to 17th July 2009 at Entebbe Uganda
49. Strategy Planning workshop - ASARECA's Non-staple crops programme organized by ASARECA, 22nd to 26th June 2009 at Entebbe-Uganda

50. ASARECA workshop on Snap Bean Project Revival; 2nd to 5th March 2009 at Entebbe Uganda.
51. SUCAPRI University based learning cycle Communications skills workshop (as a resource person) at CMRT, Egerton University, 25-30th January 2009.
52. SUCAPRI University based learning cycle Personal and Team skills workshops (as resource person) at KCCT-Mbagathi, Nairobi, 7-13th September 2008
53. Planning workshop for activity 2 (university based learning cycle) of the SUCAPRI project, 19-23 May 2008, KCCT-Mbagathi, Nairobi.
54. Development of a strategy to build capacity in the NARS institutions Workshop, East College, Embu, from 14th to 18th April 2008.
55. SUCAPRI project inception workshop, 1-3 April 2008, Kenya School of Law, Karen, Nairobi.
56. Inception workshop for “mitigating mycotoxin hazards in maize and maize products in Kenya project”, 19th- 22nd March 2008, E.A.S.T College, Embu.
57. Inception/planning meeting for edulink project to strengthen IAR4D and rural innovations in east africa (1st-3rd April, 2008) in Nairobi, Kenya
58. Workshop to review findings of the Indian and Malaysian tour and prepare final draft of the NARS policy and its implementation framework, 10th-24th February 2008, Mtwapa Mombasa.
59. Development of the National Agricultural Research System Policy Implementation Framework Workshop held on 26th June_1st July 2007, ACK Imani Guest House, Nakuru.
60. Regional workshops on the National Agricultural Research Policy (NARSP) held on 26th March 2007 at the Agricultural Training Centre, Garissa, North Eastern Province
61. Regional workshops on the National Agricultural Research Policy (NARSP) held on 4th April 2007 at Agricultural Training Centre, Embu, Eastern Province
62. Eastern and Central Africa Bean Research Network Projects Planning and Review meeting held on 12-15th March 2007, Arusha, Tanzania
63. Mycotoxin management project proposal stakeholders’ workshop held on 14th-16th February 2007: Kenya Wildlife Service Training Institute, Naivasha

64. The 10th KARI Biennial Scientific Conference and Second Agricultural Forum held on 13-17 November 2006, KARI headquarters, Nairobi, Kenya.
65. ASARECA Snap Bean Project stakeholders' workshop held at Blue Post Hotel, Thika, Kenya, on 11th-12th October 2006
66. ASARECA Snap Bean Project Inception workshop, held 28th February to 3rd March 2006, Kampala, Uganda
67. Horticultural Association of Kenya's 7th Workshop on Sustainable Horticultural Production held 28th – 1st December 2007, College of Agriculture and Veterinary Services, University of Nairobi
68. KARI Biennial Conference held on 13-17 November 2006, KARI headquarters, Nairobi, Kenya.
69. The 7th Biennial Conference of the African Crop Science Society, held 5–9 December 2005, Entebbe, Uganda.
70. National Stakeholders' Workshop on National Agricultural Sector (NASEP) Review. held at KARI Headquarters, Nairobi on 10th August 2005
71. College of Agriculture Income Generation Workshop, KEFRI, Muguga, 14-15 September 2005.
72. Joint Pre-CRAC Workshop for KARI-Muguga South and Tigoni held on 3rd-4th August 2005, KARI Muguga Station.
73. Biosafety workshop, Panafric Hotel, Nairobi in 2005
74. Stakeholders' workshop on apple production in South-western Uganda, Kabale district, Uganda, May 2005.
75. Seventh (7th) Biennial Conference of the African Crop Science Society, 5th –9th December 2005, Entebbe, Uganda
76. Workshop on New Rice Cultivars for Africa (NERICA) held at AICAD (Juja, Kenya) from 16th-17th September 2004 (sponsored by JICA)
77. NERICA (New Rice Cultivars for Africa) Trials Seminar at MIAD (Mwea, Kenya) and AICAD (Juja, Kenya) from 29th June-2nd July 2004 (sponsored by JICA)
78. Kenya Private Sector Alliance workshop on agriculture held at Panafric Hotel, Kenya, October 16, 2003.

79. End of Project Conference for the KARI Agricultural Research Fund, held December 2003, KARI HQs, Nairobi
80. Intellectual Property Training, Moi University Campus, 2003, Eldoret
81. Canadian Society of Agronomy Conference, Winnipeg, Canada, 2001.
82. The Ninth Association of African Congress on nitrogen fixation, Nairobi, Kenya, 2000
83. Manitoba and North Dakota Zero Tillage Association Conference, Brandon, Canada, 1999.
84. Plant Science Graduate Student's Conference, Winnipeg, 1999

o. EXAMINERSHIP

Selected theses examined as a non-supervisor

External

1. Ochieng Alfred Jared. 2018. Diversity of blackberry (*Rubus* L. subgenus *Rubus* Watson) accessions in selected counties in Kenya using morphological and SSR markers. M.Sc. Plant Breeding, Egerton University.
2. Charles Nyambane Onyari. 2018. Effects of irrigation and nitrogen fertilizer levels on water and nitrogen use efficiency and yield of drought tolerant hybrid maize (*Zea mays* L.) in Embu county, Kenya . PhD Agronomy, Egerton University.
3. Odongo Forrester Oluoch. 2016. Genetic diversity of bambara groundnut (*Vigna subterranean* (L.) Verdc.) landraces in Kenya using morphological and DNA markers. M.Sc. Agronomy thesis, Egerton.
4. Robert Gitahi. 2016. Morphological and Genetic Diversity of Mango Accessions (*Mangifera indica* L.) in the Eastern Region of Kenya Using SSR Markers. M.Sc. Biotechnology, Egerton University.
5. Alex Machio Kange. 2015. Effect of pre-and post- harvest factors and sorghum (*Sorghum bicolor* L. Moench) grain condition on occurrence of mycotoxin producing fungi". M.Sc. Crop Protection, Egerton University.
6. Alain Adoli. 2013. Effect of tithonia biomass and mineral fertilizers application on soyabean performance with Gatumba mining degraded soils of Rwanda. M.Sc. Integrated Soil Fertility Management, Kenyatta University.

7. Stephen M. Karanja. 2013. The effects of intercrop population and row orientation on water use efficiency and yields in sorghum –cowpea cropping system. M.Sc. Agronomy, Egerton University.
8. James Murithi Njeru. 2013. The impact of liming on biodiversity in Embu tea zone landscapes: case study Kavutiri area. M.Sc., Jomo Kenyatta University of Agriculture and Technology
9. Edith Avedi. 2013. Efficacy and safety of *Fusarium oxysporium* in the biological control of witch weed *Striga hermontheca* parasitizing maize in western Kenya. M.Sc. Crop Protection, Masinde Muliro University of Technology
10. John Okoth Omondi, 2013. Tillage effects on soil moisture availability and soybean (*Glycine max* L. Merrill) yields in Western Kenya. M.Sc. Agronomy, Egerton University
11. Victor Wafula. 2011. Genetic diversity of indigenous bradyrhizobia strains nodulating dual-purpose soyabean (*Glycine max* (L.) Merr.) genotypes and their potential to fix nitrogen in Kenya. PhD thesis, Egerton University.
12. Lilian Wambui Kariuki. 2016. Plant growth, seed yield, oil content and oil quality of linseed cultivars in Kenya. PhD horticulture, JKUAT.

Internal

13. Bintu Nabintu Ndusha. 2014. Assessment of quality control of inoculants on bean and soybean in Eastern and Central Africa. M.Sc. Sustainable Soil Management, University of Nairobi.
14. Maureen N. Waswa. 2013. Identifying elite rhizobia for commercial soybean (*Glycine max*) inoculants. M.Sc. Sustainable Soil Management, University of Nairobi.
15. Balume Kayani Mwangi. 2013. Assessment of quality control of inoculants on bean and soybean in eastern and central Africa. M.Sc. Sustainable Soil Management, University of Nairobi.
16. Judith Oloo. 2013. Evaluation of local *Trichoderma* isolates for their efficiency in biological control of *Fusarium oxysporium* f.sp. *phaseoli* in beans. M.Sc. Biotechnology, CEBIB, University of Nairobi.

17. Abigael Ngugi. 2013. Marker assisted breeding for *Striga* resistance in farmers' preferred sorghum variety Ochuti.
18. Charles Masereku. 2011. Evaluation of *Trichoderma* enhanced fertilizers on growth of common beans (*Phaseolus vulgaris* L.). M.Sc. Biotechnology, CEBIB, University of Nairobi
19. Godfrey Nakitare Nambafu 2013. Efficacy of farmers' soil fertility management practices in the control of *Striga hermonthica*: a case study of the smallholder farmers of Western Kenya". M.Sc. Sustainable Soil Resource Management, University of Nairobi
20. Theone Niyibigira. 2012. Transferring *Striga* resistance QTLs from a resistant donor source into an adapted sorghum variety in Rwanda. M.Sc. Plant Breeding and Biotechnology, University of Nairobi
21. Regina Muthoni Nderitu. 2010. Groundnut growth and yield response to fertilizer. M.Sc. Agronomy, University of Nairobi.
22. Edna Kemunto Mageto. 2011. Combining ability and heterotic grouping of early maturing maize lines. M.Sc. Genetics and Plant Breeding, University of Nairobi.
23. Nyota Hannah Nduta. 2010. Transaction costs and other determinants of choice of compliance arrangements with Global-Gap standards among small holder French bean farmers: the case of Kirinyaga district. M.Sc. Agricultural and Applied Economics, University of Nairobi.
24. Jane F.N. Lusweti. 2009. Effects of fertilizers and seed priming on root rot and beanfly damage on beans and lablab in Nandi South district. M.Sc. Agricultural resource management, University of Nairobi.
25. James K. Mwololo. 2008. Screening of sweet potato for tolerance to sweet potato viruses. M.Sc. Agronomy, University of Nairobi
26. Francis K. Kiriro. 2005. Response of green grams to fertilizer nitrogen, chicken manure application and rhizobial inoculation. Master of Science in Agronomy, University of Nairobi
27. Dominic N. Sikuku. 2004. Effect of composited farmyard manure and nitrogen fertilizer on growth and yield of maize (*Zea mays* L.). M.Sc. Agronomy, University of Nairobi.

External examination of courses

1. External Examiner, Department of Horticulture, Jomo Kenyatta University of Agriculture and Technology, 2011 to date (examination of theses and courses units).
2. External Examiner, Department of Agricultural Resource Economics, Jomo Kenyatta University of Agriculture and Technology, 2012 to date (Examination of course units)
3. External Examiner, Department of Biological Sciences, University of Eldoret, 2011 (then Chepkoilel University College) to date (Examination of course units).
4. External Examiner, Department of Crops, Horticulture and Soils, Egerton University, 2011 to-date (Examination of theses and course units)

p. REVIEWS OF JOURNAL ARTICLES AND PUBLICATIONS

1. Paper reviewer for Kenya Science, Technology and Innovation Journal
2. Paper Reviewer for KARI Scientific Conference proceedings
3. Paper reviewer for East African Agricultural and Forestry Journal
4. Paper Reviewer for Soil Science Society of East Africa Proceedings
5. Paper Reviewer for Jomo Kenyatta University of Agriculture, Science and Technology Journal
6. Paper Reviewer for African Journal of Horticultural Sciences

q. FUNDED RESEARCH PROJECTS

1. Adaptation and up-scaling of tested and applicable postharvest technologies for smallholder horticultural farmers to reduce postharvest losses supported by the National Research Fund Kenya
2. Establishment of Aggregation Centers for Smallholder Horticultural Farmers and Organization of the 1st All Africa Postharvest Congress and Exhibition supported by Rockefeller Foundation. ,
3. The Australia Awards Africa Fellowships in Increasing the Development Impact of Agricultural Research funded by the Australian Government. Duration 2015-2018
4. Joining efforts to produce elite *Melia volkensii* clones and to validate its derived biopesticides, South Initiatives 2016, Belgium, 2016-2018. Euro 75,000 to UoN

CV-Prof. George N. Chemining'wa

5. EU-ACP NUS Project “Strengthening capacities and informing policies for developing value chains of neglected and underutilized crops in Africa”, 2015-2017. Role: Project Coordinator.
6. MSc Biosafety Programme Development support from International Center for Genetic Engineering and Biotechnology (ICGEB), 2015-2016r
7. Promotion of snap bean integrated crop management technologies for improved livelihoods in eastern and central Africa, a regional research project sponsored by ASARECA. 2012-2013 project period. George N. Chemining'wa (P.I.), Dr. Michael Ugen (Uganda), Sostens Kweka (Tanzania), Prof. J.H. Nderitu and Jane Ambuko. Supporting two M.Sc. students (1-Agronomy and 1-Crop Protection).
8. Enhancing productivity of dry beans in the face of climate change through drought resilient varieties. RUFORUM funding, 2010-to-date.
9. Use of plant growth promoting rhizobacteria and Rhizobium inoculants to enhance dry bean productivity Central Kenya Highlands, NCST funding for 2012-2015 (PhD student), John Muthamia, P.M. Kimani and George N. Chemining'wa.
10. Genetic diversity, abundance and nodulation efficiency of cowpea (*Vigna unguiculata* L.) rhizobia in south western Kenyan soils. Jonah Ngeno (Kabianga University College), George N. Chemining'wa and Prof. Solomon Shibairo, supplementary funding by IFS for 2012-2015 period- supporting 1 PhD Agronomy student.
11. Enhancing productivity of maize–cowpea based cropping systems in coastal lowland Kenya through drought tolerant varieties and improved resource use. James Ndiso, Dr. George N. Chemining'wa, Prof. Florence Olubayo and Dr. Hemedi Saha. NCST funding for 2010-2013 period. Supporting 1 PhD Agronomy student.
12. Enhancing competitiveness of canning navy bean in global and domestic markets, 2009 to 2011. George N. Chemining'wa (P.I.), Prof. John Nderitu and Prof. P.M. Kimani. Supported by the National Council of Science and Technology. Trained two M.Sc. students (1-Agronomy and 1-Crop Protection), held several farmers' training in the project areas (Nakuru and Kirinyaga counties) and distributed bean seeds to farmers.
13. University of Nairobi Youth Conference held on 9th -10th March 2012, at College of Agriculture and Veterinary Sciences, University of Nairobi. George N.

CV-Prof. George N. Chemining'wa

Chemining'wa (PI). Organized a successful workshop for students enrolled in agricultural and related academic programmes from public and private universities in Kenya.

14. Amelioration of salt impacted soils in Mariakani, supported by the National Council of Science and Technology. Dr. M. Mwinyikione and George Chemining'wa which ended 2012.
15. Strengthening of university capacity for promoting, facilitating and teaching rural innovation processes (SUCAPRI) Project (2008 to-2012), supported by Edulink; led by Makerere University with ICRA, University of Nairobi, Kenyatta Univ, Egerton University and JKUAT as partner institutions. Dr. George N. Chemining'wa was PI for University of Nairobi and Team leader of the University based learning cycle activity of the project.
16. Conquering hunger in Kenya: Developing drought tolerant maize for semi-arid and arid agro-ecological zones, Supported by Commission for Higher Education (2008-2009). Dr. E. Kahiu Ngugi, George N. Chemining'wa, Prof. John H. Nderitu and Dr. Maina Muiru. Trained one M.Sc. (Plant Breeding and Genetics) student and identified drought tolerant genotypes of maize.
17. Mitigating mycotoxin hazards in maize and maize products in Kenya, supported by the Kenya Agricultural Productivity Project (KAPP) ended 2008. Dr. James W. Muthomi, Dr. James Gathumbi and George N. Chemining'wa. Trained four M.Sc. students.
18. The abundance and efficiency of rhizobia infecting green manure legumes in central Kenyan soils, Deans Research Grant, University of Nairobi (2007). George N. Chemining'wa and Dr. James Muthomi. Trained one M.Sc. Agronomy student.
19. Integrated Agricultural Research for Development activities, supported by NUFFIC, 2006 to 2010. Carried out many outreach activities on soil and water conservation in lower eastern Kenya. IAR4D Initiative.
20. Leading integrated nutrient management part in the “Enhancing Competitiveness of Snap Beans for Domestic and Export Markets” project supported by ASARECA. Prof. John Nderitu, George N. Chemining'wa and Prof. P.M. Kimani. Trained four

M.Sc. students (2-Crop Protection, 1-Agricultural Resource Management and 1-Agronomy).

21. Performance of traditional food legumes in the maize-based cropping systems supported by the Deans Research Grant, University of Nairobi, 2005-2007. Dr. James Muthomi and George N. Chemining'wa. Trained one M.Sc. Agricultural Resource Management student.
22. Improvement of grain legume production in Machakos district using low input technologies, supported by the African Institute for Capacity Development (AICAD), 2005/2006. James Muthomi and George N. Chemining'wa. Trained one M.Sc. Agricultural Resource Management student.
23. Green manure legumes research (Supported by the Legume Research Network Project), 2003-2005. George N. Chemining'wa and James Muthomi Trained one M.Sc. student.
24. Evaluation of New Rice cultivars for Africa (NERICA) trials (Supported by Japanese International Cooperation Agency (JICA), 2004-2005. George Chemining'wa
25. Role of gender in selection of maize varieties in Machakos district, supported by ECAPAPA, 2004. Elias Obudho and George Chemining'wa

r. CONSULTANCIES

1. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 20th February to 31st March 2017, Mayfair Hotel, Nairobi Kenya
2. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2016, Mayfair Hotel, Nairobi Kenya
3. Gender and anthropological studies in African Development Bank supported irrigation schemes and structures (water and livestock) in West Pokot, Baringo, Marsabit, Isiolo, Samburu and Turkana Counties in 2014-2015
4. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2015, Mayfair Hotel, Nairobi Kenya

5. Reviewing status of irrigation schemes in the Ewaso Ng'iro river basin commissioned by the National Irrigation Board of Kenya in 2010.
6. Assessed the ware potato market chain in the Netherlands and developed strategies for making the potato industry more competitive. (Jan-April 2005); client-Potato industry stakeholders, Netherlands
7. Developed strategies for profitable production of apples in South-western Uganda (Kabale district) after 2-month interdisciplinary study and interaction with stakeholders. April-May 2005. Client: National Research Organization (Kachwekano), Uganda.
8. Facilitator for university based learning cycle and multi-stakeholder platforms 2006-2011. Client: SUCAPRI Project
9. Judge at the KARI conference in 2006, 2008 and 2010

s. PARTICIPATION IN THE ORGANIZATION OF SCIENTIFIC MEETINGS

1. The Sixth African Higher Education Week and RUFORUM Biennial Conference, 22-26 October 2018, KICC, Nairobi (as a member, Local Organizing Committee)
2. The Inaugural High Panel Conference on Agriculture Research in Kenya, 13-14 September 2018, ICRAF Centre, Nairobi, Kenya (as Member, Conference Working Group, State Department of Agriculture Research, Ministry of Agriculture and Irrigation)
3. The 1st All Africa Post Harvest Congress and Exhibition hosted by the University of Nairobi, 28-31 March 2017, Safari Park Hotel, Nairobi, Kenya.
4. Sub-regional education and policy multi-stakeholder workshop on improving value chains of neglected and underutilized crops, 29th – 30th September 2016, Ngong Hills Hotel, Nairobi, Kenya
5. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2016, Mayfair Hotel, Nairobi Kenya
6. International Phytosanitary Conference, KEPHIS headquarters, Karen. 12- 16th September 2016

7. Neglected and Underutilized species workshop and exhibition on 28th to 30th September 2016, CAVS and Ngong hills hotel, Nairobi
8. Stakeholder Workshop on a Proposed Syllabus in MSc Biosafety on 7th December 2015, KALRO Headquarters, Nairobi
9. A summary report of the EU-ACP scientific communication training course held 23-27 November 2015, Nairobi, KENYA, Ngong Hills Hotel
10. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2015, Mayfair Hotel, Nairobi Kenya
11. University of Nairobi representative on local organizing committee for the November 2011 CTA sponsored International Extension Workshop held at Hilton Hotel in Nairobi.
12. End of Snap Bean Project Workshop held on 9-10th August 2011 at the Agricultural Information Resource Centre-KARI, NARL Nairobi. Sponsored by ASARECA
13. Coordinator of The International Conference for Youth in Africa 2012, held 9-10th March 2012, at CAVS-UON, Kenya
14. Local Organizing Committee member of the 7th Workshop on Sustainable Horticultural Production held at the University of Nairobi's College Agriculture and Veterinary Services from 28th November to 1st December 2007.
15. University of Nairobi representative in the Organizing Committee for the KARI Biennial Scientific Conferences and Agricultural Forums, 2006 to 2010
16. Coordinated the End of Snap Bean Project Workshop held on 9-10th August 2011 at the Agricultural Information Resource Centre-KARI, NARL Nairobi. Sponsored by ASARECA
17. Organized over SUCAPRI workshops during 2008-2011 period

t. MEMBERSHIP OF PROFESSIONAL BODIES

1. Member Soil Science Society of East Africa
2. Member of Legume Research Network Project
3. Member African Crop Science Society
4. Member Horticultural Association of Kenya

5. Member and Secretary Forum for Integrated Agricultural Research for Development (FIARD)
6. Core-team member, Integrated Agricultural Research for Development National Initiative
7. Member of University of Nairobi Alumni (Bronze category)
8. Member of University of Manitoba alumni
9. Member of Elgon Professional Association
10. Member of Commonwealth Scholars
11. Member of Sustainable Ecological Agricultural Training and Extension Centre (CBO based in Kitale)
10. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 20th February to 31st March 2017, Mayfair Hotel, Nairobi Kenya
11. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2016, Mayfair Hotel, Nairobi Kenya
12. Gender and anthropological studies in African Development Bank supported irrigation schemes and structures (water and livestock) in West Pokot, Baringo, Marsabit, Isiolo, Samburu and Turkana Counties in 2014-2015
13. Australia Awards – Africa Short Course Increasing the Development Impact of Agricultural Research on 24th October to 18th November 2015, Mayfair Hotel, Nairobi Kenya

u. COURSES TAUGHT

Oserian Crash Programme in Floriculture:

1. Fertilization, plant nutrition and irrigation

Diploma:

1. ACP 017-Application of Biotechnology in Crop Protection
2. JAH 032-Crop Production

Undergraduate:

1. ACS 104: Plant/crop physiology
2. ACS 301/ACR 301: Production of Field Crops
3. ACS 201/ACR 201/AEX 203/AEB 107: Principles of Crop Production
4. ACR 401: Biotechnology
5. FAE 382: Crop production
6. ACS 207/ACR 304/AEX 301- Pastures and Fodder Production

Masters:

1. ACS 601: Advanced Plant Physiology and Metabolism
2. ACS 603: Biotechnology
3. APP 608: Biotechnology and Molecular Techniques
4. ART 511: Biodiversity and Biotechnology
5. ASS 508: Crop Ecology and Physiology
6. ACA 604: Agronomy of Annual Field Crops & Vegetable Crops
7. ART 512: Crop Productions Systems
8. AFN 505: Food Production Systems

PHD:

1. ADR 715: Crop Production and Postharvest Management Systems
2. ADR 716: Crop improvement and Protection in Drylands

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