

# CURRICULUM VITAE

## 1.0 PERSONAL INFORMATION

NAME : Dr. Rose Onamu  
ADDRESS : P.O. BOX 1633-50200 Bungoma, Kenya  
P.O. BOX 190-50100, Kakamega, Kenya  
EMAIL : [ronamu@mmust.ac.ke](mailto:ronamu@mmust.ac.ke)  
NATIONALITY : Kenyan  
GENDER : Female  
STATUS : Married with five children  
RELIGION : Christian  
LANGUAGES : Luhya, Kiswahili, English, French, Spanish (learning German)

## 2.0 QUALIFICATIONS.

### 2.1 Academic Qualifications

- **2012:** PhD in Horticulture. The Autonomous University of Chapingo, Mexico  
March 2009- June, 2009: (Certificate in Spanish Language.), The Autonomous University of Mexico, Foreign Languages School, Tesco.
- **2004:** M.Sc in Horticulture, the University of Nairobi, Kenya.
- **1989:** B.Sc in Agriculture the University of Nairobi.

## 3.0 EMPLOYMENT HISTORY

- **2016 to date: Lecturer,**  
**Masinde Muliro University of Science and Technology –**  
School of Agriculture Veterinary Sciences and Technology  
Teaching postgraduate and undergraduate courses in horticulture, crop production, plant breeding and biotechnology.  
• March 2020- November 2020 Faculty Examinations Coordinator
- 2016 – 2019 Chairperson of the Department (**COD**) Agribusiness Management and Extension. Graduated MSc and Undergraduate students. **Founder COD** of the department, established strategic plan and initiated ISO 9001:2015 certification
- 2016 - 2017 September Chairperson Faculty Postgraduate Studies (**FGS**)

**Current research interests:** Bilateral project on Maize, Sweet potato, Irish potato viruses- Kenya- South Africa. Research work on

molecular diversity of *Rhizobium* spp. Molecular diversity of *Ralstonia solanacearum*. Rapid multiplication of virus free tissue cultured sweet potato vines.

Molecular diversity of purple tea, *Solanum nigrum* complex, Alba spp., medicinal plants.

### **Research work/Student supervision/ Grants**

#### **1. Virus diversity and distribution in crop plants**

**Billateral research grant Kenya-South Africa (6million) 2017-2020**

**MSc student 1 and 1 PhD co- supervision**

**Progress- writing thesis**

#### **2. Rhizobium molecular studies 2 MSc students co- supervision**

**URF grant**

**Progress-writing thesis**

#### **3. Ralstonia solanacearum molecular studies 1 PhD student Main Supervisor**

**NRF grant**

**Progress-Data collection and laboratory analysis**

#### **4. Indegenous vegetable studies 2 PhD students Main Supervisor**

**Progress-Proposal writing and writing thesis**

#### **5. Tea genetic diversity studies 1Msc student Main Supervisor**

**Funding by Tea Research Institute**

**Progress-Data collection**

#### **6. Supervised more than 30 undergraduate student proposals and projects.**

### **Collaborative projects**

- NRF collaborative Multi-disciplinary, Multi-institutional project on African Leafy Vegetables (ALVs) and anti-hypertensive bioactive compounds with Maseno University and KALRO (20M) to include MSc. and PhD students**
- INSEFOODS collaborative project with JOOUST world bank funding about 300M to include MSc. students
- Medicinal plants, herbs and indigenous vegetables in collaboration with Heidelberg Institute Germany. Proposal and MOU preparation to include MSc. students
- Nutrition dense indigenous vegetables (Global Nutrition Index) in collaboration with University of Namibia (UNAM). New African Plant Nutrition Research Fund; Proposal writing.

5. Collaboration with the International Services for the Acquisition of Agri-Biotech Applications (ISAAA) on GMOs, science communication and outreach
6. Collaboration with the University of Venda, South Africa on research proposal writing, student and staff exchange.

### **Programmes developed**

1. PhD. Horticulture completed (submitted to CUE) July 2020
  2. MSc. Horticulture ( to submit to senate)
- **2013-2015: Part-time Lecturer,**  
**Masinde Muliro University of Science and Technology –**  
 Sugar Technology Department Kakamega  
**Teaching** SHC 310: Olericulture, SHC 312: Floriculture and SAB 307: Horticulture including Pomology, SBT: Introduction to molecular biology, IAB: Biotechnology for crop improvement, IAE 485: Agriculture Economic Development).  
**Curriculum review and programme writing** for Sugar Technology Department, School of Agriculture and Veterinary Sciences.  
**Project proposal writing** for Horticulture improvement in Kakamega County, with emphasis in tissue culture banana production.  
**University of Eldoret** – Biotechnology and Horticulture Departments Eldoret, Kenya-(**Teaching** postgraduates: ABT 832: Molecular breeding techniques, ABT 821: Principles of plant biotechnology, ABT 812: Genetic engineering, ABT 811: Applied plant biotechnology and HOR 822, 910: Postharvest physiology and technology. **Supervise** MSc and PhD students in development of research proposals, funding and assess seminar presentations.
  - **2000-2009: Senior plant inspector, Kenya Plant Health Inspectorate Service (KEPHIS) . Duties included:**  
**Head Virology and tissue culture laboratories**
    - Management of staff and laboratories at quarantine for pathogen testing; viruses, bacteria, fungi, nematodes and insect pests (ELISA, molecular tests, indicator plants and microscopic). Multiplication of in-vitro plants (banana, passion fruit, irish potato, sweet potato and cassava) for *in-*

*vitro* conservation and safe movement in Kenya, Africa and international

### **Coordinator field inspection/audit**

- Implementation of regulations on importation and export of Plants and seeds (quarantine pests and diseases).
- Strategic planning, project proposal writing, implementation and reporting.
- Adopting and executing International Plant Protection guidelines on Phytosanitary measures and World Trade Organization rules.
- Biosafety regulations for GMOs.
- ISO Certification Standards (Quality Management Systems; 9001:2000 and Laboratory Management Systems; 17025)

### **Regional cassava project coordinator**

Write proposals, plan, budget, implement cassava germplasm collection, virus testing, virus cleaning, in-vitro multiplication, conservation and exchange in the region (Uganda, Rwanda, Burundi, Tanzania, Mozambique, Malawi, Zambia and DRC). Oversee technical and administrative operations of the project, including technical and financial reporting.

- **Management of grants**, CIP, IITA, USAID and EU.
- **Train** farmers and staff on compliance to phytosanitary requirements (export/import), supervise students on attachments.

- **1993-1996 Extension and training officer, M&E-Kenya Woodfuel and Agroforestry Programme:**

- **Trained Farmers using participatory approach with gender Concerns.**

- **1990-1993 Lecturer-Sangalo Institute of Science and Technology, Bungoma, Kenya.**

Taught agricultural production and participated in outreach programmes.

**FIELD DAYS, WORKSHOPS, TRAININGS, SEMINARS AND CONFERENCES**

**Management training 15-19 May 2019 Sirikwa Hotel Eldoret.**

**Safety training at MMUST in June 2019**

**Virtual training on online teaching and learning (ODeL) March-April 2020**

**Virtual Institutional Research workshop MMUST 12<sup>th</sup> November 2020**

**Virtual training on online post graduate registration procedures and requirements  
25<sup>th</sup> September 2020**

**Virtual Genome Editing and Biosafety Conference 10<sup>th</sup> -13<sup>th</sup> November 2020**

**Virtual Research grant managers training (SARIMA) South Africa.**

**13<sup>th</sup> June-20<sup>th</sup> July 2020**

1. Onamu R, Ndiema A and J. Ng'ang'a (2018) Role of biotechnology in sweet potato farming for improved nutrition and food security. **Ist Pan African Congress Held at Hotel Royal Swiss 18-21 June 2018. Kisumu, Kenya**
2. Rose Onamu<sup>1</sup>, Omieno , K<sup>2</sup>, Kariaga M. G<sup>1</sup> Irungu N<sup>3</sup>. <sup>1</sup>Kariuki<sup>3</sup>. and Simon Ndungu<sup>4</sup>, Chesambu<sup>5</sup> N. A.(2018) The role of public private partnership in development and utilization of masinde muliro university of science and technology “mm-kilimo” mobile technology. **paper presented at the 2018 INWES Regional Conference 11th to 13th May, 2018, Tunisia.**
3. Kariaga, Ooko Ganda and Onamu (2017) Yorghut flavored with oyster mushroom essence: MMUST YOGO. *ICWES 17 International conference held in New Delhi 5-7<sup>th</sup> October 2017. Book of Extracts pp34.*
- 4 Seminar on Public procurement by Public Procurement Oversight Authority (PPOA). 1<sup>st</sup> July 2016. MMUST, Kakamega, Kenya
7. 10<sup>th</sup> Mmust International Conference on Health. 24<sup>th</sup> -26<sup>th</sup> May 2016. Bishop Stam Pastoral Centre Kakamega, Kenya. **Organiser** and presented paper on “Morphological And Molecular Characterization of Potato (Solanum Tuberosum L.) Cultivars Grown in Mexico for Sustainable Production and Health.”
8. Consortium of New South African Medical School (CONSAMS) workshop.16-18<sup>th</sup> May 2016. Golf Hotel, Kakamega, Kenya. Presented paper on “Agriculture and Medicine.”
9. Seminar on Sensitization for the Committee on National Cohesion and National Values of Masinde Muliro University of Science and Technology. 5<sup>th</sup> May, 2016, MMUST, Kakamega, Kenya.

10. International conference for international network for women in engineering and science. 21-23 October 2015, Speke Resort, Munyonyo, Kampala, Uganda.
11. E-learning Horticultural Postharvest programme. Administered by University of California Davis 2015/2016
12. Horticulture farmer training on phytosanitary export requirements. 12-16 February, 2009. Embu, Kenya.
13. Planning workshop for Center of Phytosanitary Excellence (COPE). 2008. Lusaka Zambia. COMESA secretariat. Presented paper on development of quarantine pest databases.
14. Strategic management course. 4-26 October, 2008. Embu, Kenya
15. Training on ISO certification. 6-9 October, 2007. Nairobi, Kenya.
16. Planning workshop on management of cassava virus diseases. 6-10 September, 2007. Rwanda.
17. Pest diagnostics Seminar. 3-9 July, 2007. KARI, NAL, Nairobi, Kenya.
18. Planning meetings for Africa Growth Opportunity Act (AGOA) initiative. Ministry of trade, chamber of commerce, Nairobi, Kenya.
19. Standard setting meetings for root crops (cassava, sweetpotato). Kenya Bureau of Standards (KEBS), Nairobi, Kenya.
20. Training workshop on management and monitoring of confined field trials for GMOs. 2-6 June, 2006. PBS. Busia, Kenya
21. Training workshop for testing of cassava viruses using ELISA and molecular techniques. 11-17 April, 2006. Mikochei research station. Tanzania.
22. Onamu, R; Kimani, E, Kedera, C.J, Legg, J. 2005. In-vitro conservation of cassava germplasm using osmoticas. 7<sup>th</sup> biannual African crop science conference. Entebbe, Uganda.
23. International workshop for testing of GMOs. 17-22 May, 2005. ILRI, Beca, Nairobi, Kenya.
24. International training workshop on GM regulation and biosafety. 2-23 August, 2004. Brussels, Belgium.
25. Onamu, R; Kimani, E, Songa, W and Kedera, C.J. Role of KEPHIS in germplasm diversification and exchange with respect to cassava brown streak virus. International workshop on cassava brown streak disease present and future. 27-30 October, 2002, Mombasa, Kenya. Pp. 58-62.
26. International workshop on East African Quarantine pest diagnostics. 12-22 November, 2001. Museum of Kenya, Nairobi, Kenya.

27. Monitoring and evaluation workshop. 21-25 April, 1996. Kenya Woodfuel Agroforestry Project. Busia Kenya. Facilitator.
28. Farmer field days on adoption of agroforestry. 1993-1995. Kenya Woodfuel Agroforestry Project. Busia Kenya. Facilitator/Participant.
29. Participatory Rural Appraisal workshop. 3-9 September, 1993. Kenya Woodfuel Agroforestry Project. Busia Kenya. Facilitator.
30. Agroforestry awareness workshop for stakeholders. 11-13 August, 1993. Kenya Woodfuel Agroforestry Project. Busia Kenya. Facilitator.

#### **PAPERS PUBLISHED:**

1. Onamu, R; In-Vitro propagation of Selected Ornamental plants using thidiazuron as a chemical of choice. Msc Thesis 2004, 200pp.
2. Onamu, R; Obukusia S.D, Musembi, N and Hutchinson M.J. 2003. Efficacy of Thidiazuron in Vitro propagation of Carnation shoot tips: Influence of dose and duration of exposure. African Crop Science Journal 11:1-6.
3. Hutchinson, M.J; Onamu, R. and Obukusia, S.D. 2004. Effect of Thidiazuron, Benzylaminopurine and Naphthalene Acetic acid in –Vitro propagation of Tuberose ( Polianthes tuberosa) L.) From shoot tip explants. Journal of Agriculture Science and Technology 6:48-59.
4. Hutchinson, M.J; Onamu, R and Obukusia, S.D. 2004. In Vitro Propagation of Ornithogalum saundersiae: Pontential of Thidiazuron as chemical of choice; Journal of Agriculture Science and Technology 6:60-68.
5. Hutchinson, M.J; Onamu, R, Kipkosgei, L and Obukusia, S.D. 2003. Effect of Thidiazuron, NAA and BAP on in vitro propagation of Alstroemeria aurantiaca cv. ‘Rosita’ from shoot tip explants. Journal of Agriculture Science and Technology
6. Onamu, R; Molecular characterization of potato (Solanum tuberosum L.) genotypes and transformation with reporter genes. PhD Thesis 2012, 180pp.
7. Onamu, R; Juan, P.L; Jamie, CS, C, Jose L.R and Joel, N.P. 2012. In vitro regeneration and Agrobacterium mediated transformation of potato (Solanum tuberosum L.) cultivars grown in Mexico. Plant Tissue Cult. & Biotech 22(2):93-105.
8. Onamu, R, Juan P.L, Jaime, CS; Jose, L.R and Joel, N. P. 2012. Analysis of morphological and molecular markers in potato (Solanum tuberosum L.).Rev. Fitotec. Vol.35(4):267-277.

9. Onamu, R, Juan P.L, Jaime, CS; Jose, L.R and Joel, N. P. 2015. Genetic diversity among varieties of potato (*Solanum tuberosum* L.) cultivated in México. *Rev. Fitotec.* Vol.38(1):7-15.
10. Onamu, R, Juan P.L, Jaime, C.S, Jose, L.R and Joel, N. P. 2016. Molecular characterization of potato (*Solanum tuberosum* L.) genotypes grown in Mexico using RAPD and ISSR markers. *African Journal of Biotechnology.* Vol. 15(22): 1015-1025.
11. Kariaga, Wakhungu, Were, Muoma, Onamu and Wekesa (2017). Rice Blast *Pyricularia oryzae* CAV. Isolates in Kenya Characterized Sequenced and Registered. *International Journal of Life Sciences Research* Vol. 5, Issue 3, pp: (23-30).
12. Kariaga. M.G, Onamu. R and Were.H.K. 2018. Reaction of Rice Blast *Pyricularia oryzae* CAV isolates on a set of improved rice varieties in Western Kenya indicator to presence of pathogenic strains.2018. *Ruforum working document .17 (1)pp.* 811-820
13. Alinda.A, Okoth P.K, Onamu. R,Read.D,Genevivieve. T and Mwoma J.O (2020) Next generation sequencing platforms for potato virus hunting, surveillance and discovery. *African Journal of Bacteriology* Vol. 12 (1).pp.1-11.
14. Mulama. S, Onamu.R and Mwoma. J.O. Abundance and symbiotic rhizobia colonizing soybean in soils of Kakamega County, Western Kenya. (Submitted on 10<sup>th</sup> November 2020 to *Hyundai journal of agronomy*). Making corrections

#### **Papers in preparation:**

1. Onamu, R, Juan P.L, Jaime, CS; Jose, L.R and Joel, N. P. 2013. Regeneration protocols for three potato (*Solanum tuberosum* L.) cultivars grown in Mexico.

#### **REVIEWER: Revista Colombiana**

##### **AREAS FOR CONSULTANCY:**

**Agroforestry**, Floriculture, olericulture, pomology, phytosanitary standards-import/export, postharvest technology, plant biotechnology-molecular breeding, tissue culture, genetic engineering, biosafety, ISO- certification.

**PATENTS TRADEMARK AND COPY RIGHTS:** Publications, protocols.

1. Application to patent/trademark **MM-Kilimo (MMUST Mobile Application- Farmer interactive APP).**
2. **Two University level books (Editing for publication)**



## **INCOME GENERATING ACTIVITIES**

- Committee member of MMUST Model Farm
- Specifically coordinating Vegetable /Tomato greenhouse activities/Tree nursery
- Participate in organizing short courses/conferences/workshops

## **COMMUNITY OUTREACH**

- Organize and participate in Shows/ exhibitions/field days/farm visits/schools

## **MEMBERSHIPS:**

**Member**, International Society for Horticultural Science (**ISHS**): Member of the following commissions/sections/working groups: In-vitro culture, molecular markers, genetic engineering, Banana/plantain, Citrus, Roses, Irrigation and water supply, Quality and post harvest technology, Medicinal plants and herbs.

**Member**, African Biotechnology Stakeholders' Forum (ABSF)

**Member**, Kenya Horticultural Society

**Member**, Horticulture Association of Kenya

**Member**, American Society for Horticulture Science

**Member**, International Network for Women in Engineering and Science (INWES) AWSE-Kenya-Founding member Western chapter hosted by MMUST.

## **AWARDS:**

1. Government of Kenya scholarship to study BSc. Agriculture at the University of Nairobi 1986
2. Government of Kenya scholarship to study MSc. Horticulture at the University of Nairobi 1997
3. Mexican government scholarship to study PhD in Horticulture at the Autonomus University of Chapingo 2009
4. Arturo Fregoso Urbina award for the best postgraduate thesis 2012 by the Autonomus University of Chapingo 2013.

**OTHER ACTIVITIES:**

**Board member:** School of Agriculture Veterinary Science and Technolgy (SAVET)

**Member:** Ad hock committee on student examinations irregularity

**Member:** School farm committee

**Board member,** Shikusa Borstal Institution, Kakamega

**Board member:** Maloho Secondary School, Bungoma.

**Founder and Chairperson:** Sawa juhudi women group, Kenya Buisness Empowerment Project, Sawa sawa fresh fruit/veg.

**HOBBIES:**

Reading, gardening, travelling, community work (Agroforestry), networking, publishing, languages, swimming, singing.

**Others:** On ResearchGate , google scholar,Linkedin

## **REFEREES:**

1. Dr. Vitalis Ogemah  
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